

SD Times

SOFTWARE DEVELOPMENT

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ORACLE SHUFFLES TOOLS IN 9i DEVELOPER SUITE

SCM, business-intelligence JavaBeans added;
JDeveloper last of the stand-alone products

BY ALAN ZEICHICK

Oracle Corp. has added new applications to its 9i Developer suite, which encompasses its JDeveloper Java IDE and several other utilities designed for creating code and reports for its 9iDB database and 9iAS J2EE application server, and will no longer be offering tools, other than JDeveloper, as stand-alone products.

"The way we're selling tools now at Oracle is that you can buy Oracle9i JDeveloper by



Most tools will no longer be sold individually, says Oracle's Dwight.

itself, for \$995, or you can step up to Oracle Developer Suite for \$5,000," said Bill Dwight, vice president of application development tools. "[The suite] is aimed primarily at our enterprise customers, and includes JDeveloper as the anchor tool, but also Oracle Forms for our PL/SQL developers, Oracle Reports and other business-intelligence tools. There's enhancement across the board, too." The company will no longer be sell-

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Linux Vendors Stand United On Distribution

Four companies cut R&D costs, reduce
number of offerings to certify against

BY EDWARD J. CORREIA

Four Linux developers have banded together to create UnitedLinux, a common distribution of the open-source operating system to be based on the Linux Standard Base (LSB) that the group hopes will simplify targeting Linux in the enterprise by reducing the number of distributions that hardware and software vendors must certify against.

The four companies, Caldera International Inc., Conectiva S.A., SuSE Linux AG and Turbolinux Inc., have formed UnitedLinux LLC (www.unitedlinux.com), which will handle marketing and branding issues of the new Linux distribution, and be funded by UnitedLinux license sales. Each vendor is free to continue to develop its own Linux version and add value such as high availability to its respective united version, provided these features don't affect compatibility.

According to Curt Porritt, Caldera's director of corporate strategy, UnitedLinux represents the future of Linux. "We predict that other Linux companies will either join UnitedLinux, join Red Hat or go away." Red Hat Inc. is the market leader; IDC did not provide competitive market share, but a spokesperson did say the four UnitedLinux companies combined have half the share of Red Hat.

Porritt claimed that when approached, Red Hat was not interested in participating. Mark de Visser, Red Hat's vice president of marketing, issued this statement: "Too many distributions hamper the migration of applications to Linux, so if this effort by Caldera and others consolidates distributions, it is a good development."

Porritt said member companies stand to gain by pooling resources. "We will save money

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Gartner: Palm Losing Ground to Pocket PC

Palm OS 5 is released, but will it help to stop the bleeding?

BY EDWARD J. CORREIA

PalmSource Inc. is hemorrhaging market share, according to research firm Gartner Inc. The steady decline of unit sales of Palm OS-based devices relative to competitors was evidenced by a recent report by Gartner showing that worldwide sales had slipped to 55 percent for the first three months of this year, down from 57 percent for all of 2001, and down from 66 percent for 2000.

And even in the U.S., where Palm OS still enjoys a healthy margin over distant competitors, Palm OS's market share

shrank to 72 percent in 2001, dropping from nearly 82 percent a year earlier.

Todd Kort, senior analyst at Gartner (www.gartner.com), attributed Palm's shrinking market mainly to an increase in competition. "That's to be expected. For a while there, Palm had the

whole market." But Palm has seen Microsoft steadily eat into its share with Pocket PC, the Windows CE-based operating system that in 2001 more than doubled its market share from a year earlier and increased its share to about 21.5 percent in

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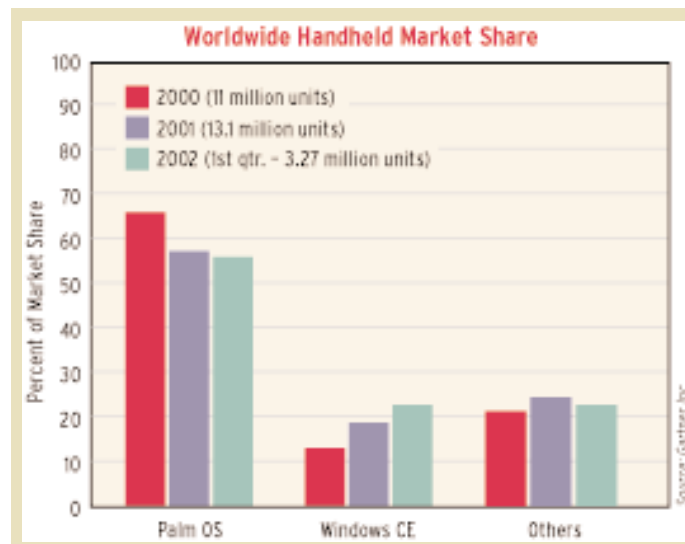
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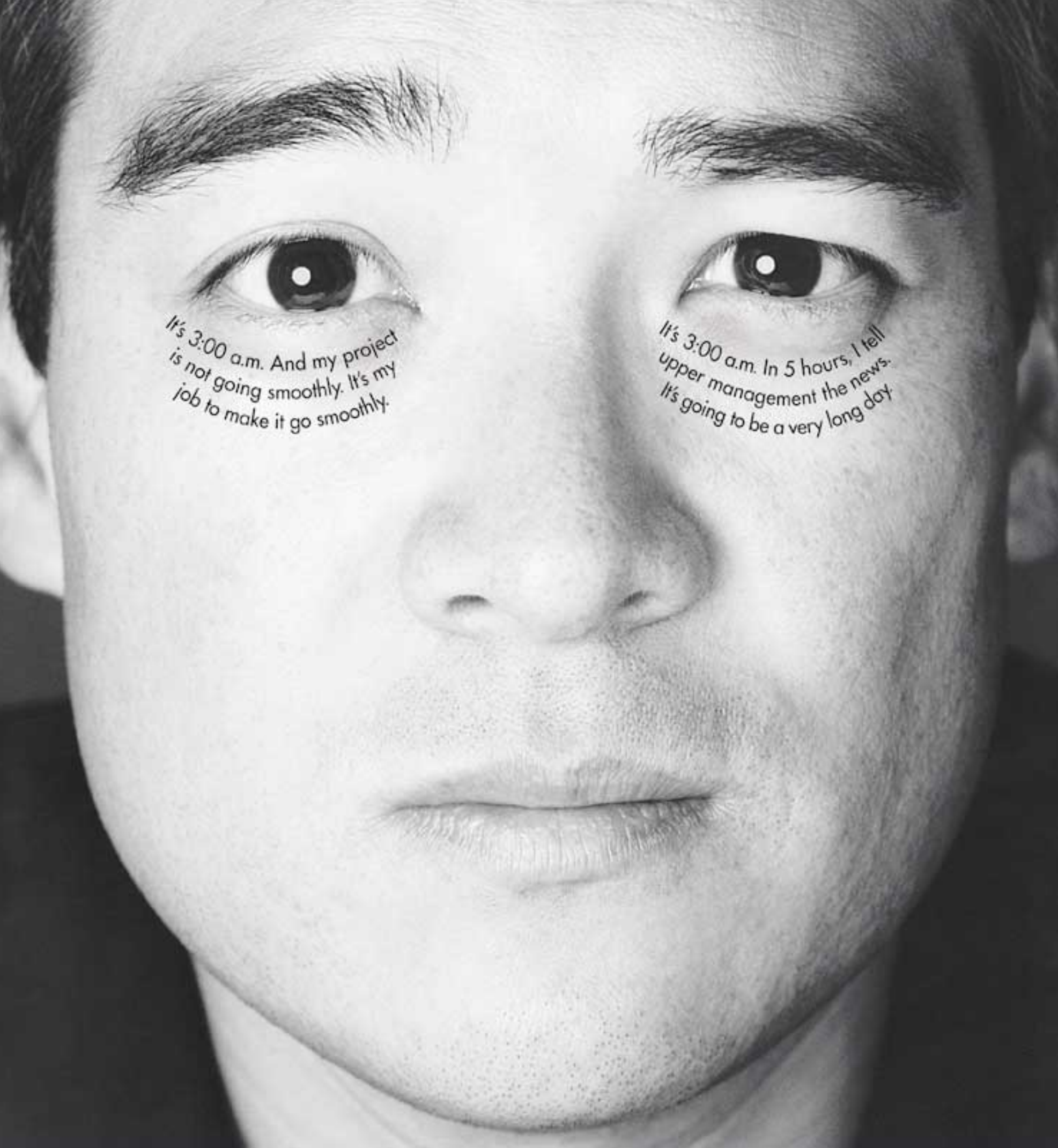
BY ALAN ZEICHICK

On June 11, Sun Microsystems Inc. was expected to deliver its completed Java Web Service Developer Pack—the first release of the add-on Java APIs to be based on final code, rather than beta software.

Well, almost. Peter Kacandes, Sun's senior product manager for Java, XML and Web services, described the biggest change with the now-finished Java WSDP as "making the Java APIs for XML-based RPC reference implementation complete with the specification being worked on by the Java Community Process. That's currently being voted on by the JCP's executive committee. Assuming that [the vote] passes, everything in this pack is complete. People can actually take the

► continued on page 10





*It's 3:00 a.m. And my project
is not going smoothly. It's my
job to make it go smoothly.*

*It's 3:00 a.m. In 5 hours, I tell
upper management the news.
It's going to be a very long day.*

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WRQ Host Emulation Now Based on J2EE

Reflection for the Web 5.0 scraps IIS, uses Tomcat, Java servlets to run on Windows

BY ALAN ZEICHICK

The fifth version of WRQ Inc.'s browser-based host terminal emulation software, Reflection for the Web, now has a Java-based technological underpinning, which provides for easier installations, Web-based management and even the ability to run the client application outside a Web browser, according to the company. The software is expected to ship on June 28.

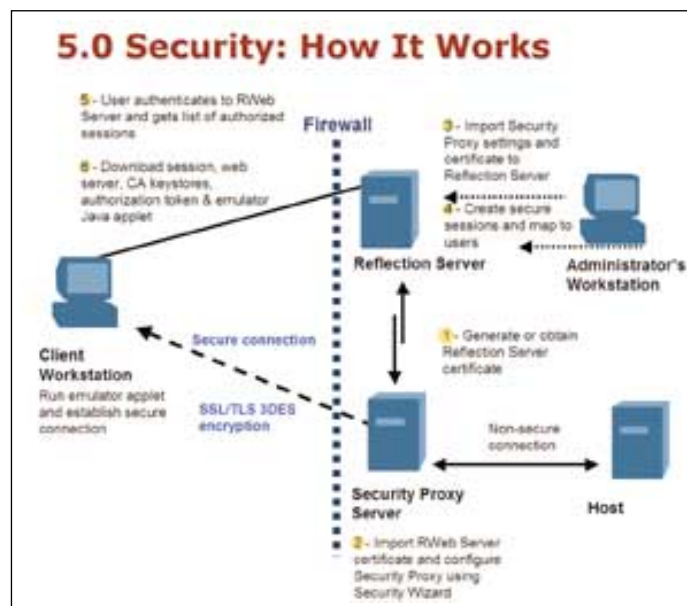
By moving to Java, the software addresses what Donovan Deacon, senior product manager at WRQ (www.wrq.com), described as problems installing Reflection for the Web on a Windows server. "It was a bit complex, and a lot of customers hadn't worked with IIS before. One of the major goals for this release was to make deployment easier, and the first priority for this was on the Windows platform, where we found the most pain. Unix administrators are pretty good at working on their own and getting things up and running, but a Microsoft administrator is used to having a nice installer and being led through [the installation]."

The solution? Unplug the Windows Web server, said Deacon. From version 5.0 onward, Reflection for the Web uses J2EE, rather than Microsoft's IIS. "We found that this buys us a lot for ease of development, as well as letting us deploy into many environments."

When running on a Windows server, WRQ installs and configures Apache's Tomcat, "and then Tomcat acts as both a servlet runner and a Web server, out of the box. By default, you don't have to do any Web server configuration." The management tools are all based on Java servlets and JSP, Deacon said, adding that optionally, Reflection for the Web can be installed onto any Java application server.

Another important change with this version, according to Deacon, is that Reflection for the Web's management functions now also can be performed in a browser.

Also new for this release is read-only support for a range of directory services, including LDAP and Microsoft's Active Directory. Deacon emphasized that Reflection for the Web



Reflection for the Web 5.0 supports the RSA security protocols.

does not require schema extensions to any of the directories. "By comparison, IBM's Host-on-Demand, the market leader in Web-to-host, requires that you work with LDAP schema extensions, and they only support Netscape and IBM directory services," he said. "They have no support for Active Directory." The Netscape directory server is now known as Sun's

Sun ONE Directory Server.

WRQ also has enhanced session security in Reflection for the Web by supporting the RSA security protocols using secure sessions with SSL, and can do SSL directly to mainframes or AS/400 servers, if the host system is SSL-enabled, according to Deacon, and allow a longer key length of up to 2,048 bits. "The customers like having the

choice; the higher you go, the more secure you are, but the more impact it has on performance," he added.

For developers, the company has moved to a pure Java API. "In the past, we've always had a proprietary JavaScript API, and that's worked very well," said Deacon, "but we had a lot of requests for a more event-driven API, and we wanted to have something more open and less proprietary. So, we've added an Emulate class library API, based on HACL." HACL is the Host Access Class Library, developed by IBM and used by a number of vendors in the host-access market.

Finally, Deacon added, "we've added support for [Sun's] Java Network Launch Protocol using Sun's Java WebStart. We had the ability to choose to create a terminal session for a browser or a JNLP client, like WebStart. That gives us another way to use Java, and gives customers more options, because browsers sometimes have issues when it comes to displaying dynamic content as opposed to static content." ■

Rational Creates Second Modeler, for XDE

Says it won't replace Rose; TestStudio scripts now written in Java

BY DAVID RUBINSTEIN

A second modeling tool and intelligent Java test scripts are among the key new features as Rational Software Corp. last week released updates to its XDE model-driven development environment and TestStudio bug-tracking products. The company also made minor enhancements to its PurifyPlus runtime analysis and Rose Real Time UML modeling tools.

The company wanted to make XDE "available to more members of the development team," said Rational's director of marketing, Bill Taylor, who introduced XDE Modeler, which targets architects and designers. "We wanted to ease the difficulty of starting a project with one architecture and manage the requirements changes that could change the architecture, and track the impact of the architectural changes on the implementa-

tion," he explained. XDE Modeler sells for \$1,595, below the XDE Professional Edition price of \$2,995; the subset of XDE Professional does not include round-trip engineering capability or the ability to implement language-specific or platform-specific code patterns.

Taylor estimated there are more than 3 million professional software developers, and acknowledged that fewer than 10 percent of those use modeling tools. Among the barriers to use, he said, are having to learn UML and leave their normal IDE to create models. To address that, he said, XDE Modeler includes assisted modeling; the first release supported Java while this version adds C#, with Visual Basic .NET and C++ support to follow. Now, C# developers can create UML models using C# constructs.

As to why Rational would need to introduce a modeler that

seemingly competes with its own more well-established Rose modeler, Taylor explained they are intended for different users. Development teams using XDE Professional, which was introduced in February and runs within IBM's WebSphere WorkBench and Microsoft's Visual Studio .NET IDE, would have the architects and designers use XDE Modeler, while development teams using other IDEs, such as Borland's JBuilder or Microsoft's Visual Studio 6 or those that don't have a Java IDE, would use Rose. Both have full UML capabilities, Taylor said.

Other significant improvements to XDE Professional include new capability to create data models in UML—conceptual, physical and logical databases all can be represented in one diagram—and the ability to publish models to the Web in HTML format for review by people not using the

tool themselves, Taylor said.

In the TestStudio 2002 Release 2, the use of a variable pattern-matching algorithm gives test scripts the ability to determine if an object is a match to a previous version of the application by assigning weighted values to several unique properties, according to Dave Locke, Rational's director of product marketing. The script captures individual objects so that in the next version, it tests only what it did not test the first time. "If a button name changes, that script would require manual intervention to map it," Locke said of old test scripts. With Rational's new ScriptAssure feature, "the developer can choose how close [a match] is close enough, or require an exact match" between objects in different versions, he said.

The scripts are written in Java, not JavaScript, Locke said, which allows testers with more techni-

cal skills to extend test scripts by programming in Java. Support for Java Foundation Classes (JFC), AWT and SWT has been built into ScriptAssure, providing more parity between developers and testers. Locke emphasized that testers do not have to learn Java to use the ScriptAssure testing tool, but Java provides additional power for high-end testers if they need it.

ScriptAssure has been built into IBM's WebSphere Workbench shell, which also is used in the Eclipse open-source project, to provide a more common interface for testers and developers, who also can debug and manage code in the IDE.

PurifyPlus, Rational's runtime analysis tool, now runs inside Microsoft's Visual Studio .NET IDE, so developers can code, design, model and test applications at runtime, Taylor said. Rose RT, the real-time version of the Rose modeler, now has the ability to generate code from passive classes, for use in embedded digital signal processors, he said. ■



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Zero G: A 'Fundamental Shift' in Installer

BY ALAN ZEICHICK

Zero G Software Inc. has introduced a major new version of its InstallAnywhere installer, with an emphasis on supporting software built by geographically dispersed development teams, as well as installing complete software suites.

"This is one of the most fundamental shifts in InstallAnywhere we've ever done," boasted CEO Eric Shapiro. "We don't even see the competition on the radar any more."

According to Shapiro, the biggest installation pain point in big companies is distributed team development. "They have these larger teams that do development of different components of their software, in different organizations, in different parts of the world, and they want to be able to build up an installer for the entire mass of products... InstallAnywhere's previous incarnations have always been geared to the individual software developer."

The solution in InstallAnywhere 5.0, he said, was "we put in something new called 'source path management,' which allows you to add files to your project in a way that uses variables, or macros, that will get substituted depending on your development system. I can have a completely different development system than you, and we can share the exact same project files, because your source path variables will point to files on your system, and mine will point to files on mine."

For the suite installers, said

Shapiro, "we take the individual installer components [for each part of the suite] and merge them together into a single master installer. The feature is called Suite Installer, but the methodology is something we call 'merge modules.'"

Shapiro explained that "a developer will create an installer [for one part of the suite] and save it as a merge module. The merge module is actually a self-contained installer module that contains all the instructions for installing all the features of that particular software component. Then the person who is creating the suite installer will pull all these merge modules

together and merge them into a master project."

Shapiro compared that with how it worked in previous versions: "You'd have to have the individual teams designate one person that would be doing all the installation. This is typical of all the other installer products in the market today: They'd have one person who's the 'installer guy,' and he'd put all these things together. It's a real pain in the neck."

Shapiro said that Zero G's merge-module concept lets one developer create templates for graphics, license agreements and look and feel, and send that around to other

developers as a merge module that they can use to build other modules. Also, he said, "developers can send merge modules to their OEM partners or their customers' IT departments, so they can customize the installer before it goes to the end user."

Finally, said Shapiro, "we are building up a library of merge modules from third-party vendors. For instance, the first thing we've done is create a merge module for [Apache's] Tomcat that's available from our Web site. If you're creating an application that needs to have Tomcat, you don't have to figure out how to install Tomcat; you can take this merge mod-

ule, add it to your project, and Tomcat will be installed."

Shapiro said that Zero G (www.zerog.com) has so far created merge modules for Tomcat, IBM's Cloudscape database, Sun's J2EE and the JBoss app server.

Available now, InstallAnywhere 5 comes in two versions, a Standard Edition for \$995 targeted at desktop applications, and a \$2,995 Enterprise Edition that can add an application-specific Java Virtual Machine and install to developer-specific locations, and offers other features for installing server applications. Both are available for Linux, Mac OS X, Unix and Windows. ■

MAKING APPLICATIONS BY THE DROPLETS

GUI server incorporated into JBuilder IDE; others on tap

BY DAVID RUBINSTEIN

To help Web developers make their applications more robust and to help traditional developers cut down on the number of clients they have to maintain, a 2-year-old New York company called Droplets Inc. has released its GUI server and development kit as an add-on to Borland Software Corp.'s JBuilder Java development environment.

The Droplets server presents the full GUI capabilities of fat-client applications while maintaining the code on a central server, which provides enhanced performance and security, according to Droplets chief software architect Lou Franco, as well as reducing

costs. The main benefit of including it in JBuilder, he said, is to allow JBuilder customers to build more portable, interactive

applications without having to learn a new tool or language.

Another benefit of running the application on the server,



Droplets claims no refactoring is needed for cross-platform compatibility.

Franco, said, is that it provides freer access to back-end resources. "You don't have to set up conduits to all the back-end systems from the client," he said.

Marketing vice president Bill Power said the company is helping to push the notion of an executable Internet, which marries the usability and functionality of fat clients with the benefits of server-based Web applications, such as reduced cost and maintenance. Software upgrades, for example, have to be made in only one place instead of on a number of clients throughout an organization, he said.

An evaluation copy of the software is available for free at www.droplets.com. Power said the company expects to complete add-ins for IBM Corp.'s Eclipse open-source development framework and Oracle Corp.'s JDeveloper by the end of the year. ■

Informatica Integrates Data, Metrics in Real Time

BY DAVID RUBINSTEIN

When business events occur, how quickly does a typical organization respond to them? Probably not fast enough: Customers are demanding that action be taken on their requests almost immediately, while line-of-business managers and executives are finding they have a need for the most up-to-the-minute information they can have.

That's the premise underlying PowerCenter RT, a new data integration tool from Informatica Corp. (www.informatica.com) that moves information in real time and is tightly integrated with Informatica's analytics

software. It also describes the path the company will follow as it seeks to stand out from both the data integration and analytics markets, according to president and COO Diaz Nesamoney.

"We have realized there is a need to tightly couple transaction systems and analytics systems," he said. "This is our first step with a lot to follow. If analytics are real-time but the data isn't, the [business] problem isn't solved."

With PowerCenter RT, which is set to ship by the end of the month, response to an event happens in the same cycle, not offline at a later time, according

to Nesamoney. "Batch-oriented processes were okay when business events were measured in months or quarters. Now action needs to be taken on [an event] almost immediately," he explained, citing airlines as an example of an industry that's monitoring demand for seats in real time and adjusting prices accordingly; he noted that the price of a seat can change several times within a 24-hour time frame. In manufacturing, the need for real-time data and metrics is equally compelling. "Connecting demand and supply is a big issue. You don't want to be caught in a build cycle when demand drops,

and then you're left to try to sell off old inventory."

The new tool works to combine real-time transactional data with historical information to generate powerful business performance monitoring, Nesamoney said. Also, PowerCenter RT allows companies to track the flow of data across transactional systems, messaging middleware and data stores to ensure the system is performing optimally with the most information available, he added.

For the real-time integration to work, Informatica has developed a ZL (Zero Latency) Engine, an "always-on" integration server that can plug into

other message delivery systems, detect messages and deliver them. Users can create scenarios for switching between real-time and batch modes, Nesamoney said. ZL Engine is "transaction aware," he added, which means it can process transactions knowing they are complete; for example, a bank officer at one branch is able to approve a money transfer knowing a deposit was just made at a different branch.

Informatica also has updated its PowerCenter data integration tool to version 6, with repository capabilities changed from passive storage of metadata to a server-based architecture for scalability and extensibility for integration with other enterprise applications, he said. Pricing was not provided by press time. ■

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News Briefs

COMPANIES

Cape Clear Software Inc. and **Quintessence Systems Ltd.** are collaborating to build a tool suite to provide Web services access to PL/SQL-based Oracle applications. The solution will combine Quintessence's in2j migration tool with Cape Clear's CapeConnect Web services server . . . **AltoWeb Inc.** and **WRQ Inc.** are working together to offer Web services access to host applications using WRQ's Verastream host-access tools and AltoWeb's Application Platform, a J2EE app server. . . . **MKS Inc.** has launched a process-assessment practice, to accompany its SCM installation and training programs, in conjunction with **Afora Inc.**, a consulting firm specializing in software configuration management.

PRODUCTS

AdventNet Inc. has a new JMX-based middleware management application for BEA Systems Inc.'s WebLogic app server. **AdventNet Middleware Manager** monitors the Java application as well as the app server, database, Web server and log files, and can be accessed either with a local console or remotely using SNMP . . . **Microsoft Corp.** has released a beta version of its **.NET Speech SDK**, an add-on for Visual Studio .NET that it claims will allow developers to speech-enable their Web services . . . **Versata Inc.** has new **business-logic designer and runtime plug-ins** for IBM Corp.'s WebSphere Studio and WebSphere Application Server. The WebSphere Studio plug-in lets developers declaratively specify business requirements as transactions, rules and workflows, which can then be directly executed in the new business logic engine within the WebSphere Application Server. The plug-ins will ship by September . . . **Metrowerks Inc.** has released version 8.0 of its **CodeWarrior Mac OS** and **Mac OS X**. The new version of its development suite supports Mac OS X's Cocoa Objective-C class libraries. The company also released **CodeWarrior for Windows** version 8, which adds a new optimized C/C++ compiler. The Mac OS and Windows versions both also add code completion features for C/C++ and Java. Each costs \$599 per developer seat or \$799 for both . . . **Panorama**, a transaction monitoring application from Altaworks Corp., has been updated to work with IBM Corp.'s Performance Monitoring Infrastructure APIs, found in its WebSphere app server and DB2 database. Panorama 1.5 also contains hooks for reporting application failures to Altaworks' professional services consultants . . . **Rogue Wave Software Inc.** has released **Application Tuning System**, a memory allocator for Linux and Unix claimed to offer 30 percent to 50 percent performance gains on multithreaded applications that make extensive use of the memory heap . . . **Evolutionary Technologies International Inc.**'s upgraded **ETI Solution** data-integration manager now works with the .NET Framework. Version 5 allows developers to create data interfaces via a downloaded software component . . . **Akiva Inc.** has updated its real-time Web collaboration software, **ChatSpace Community Server**. The new 3.1 release, which adds online community functions to Web sites, now includes tools to let administrators see where visitors are on a site, and the path they took to get to that page, and if necessary pop-up chat windows to assist the visitors . . . Version 2002 r2 of eHelp Corp.'s **RoboHelp** help authoring package now allows document searching outside of the RoboHelp project, more robust international language support, an easier-to-use spell checker and a new gallery of user-interface skins . . . **California Software Corp.** has begun shipping **Baby.NET**, a version of its AS/400 terminal-emulation and application integration suite that is compatible with Microsoft's .NET Framework, and which can be used by Visual Studio .NET to build host-enabled Web applications . . . The Scottish firm Runtime Revolution Ltd. has updated its Web development environment, **Revolution**. Version 1.1.1 now runs natively on Mac OS X, in addition to Linux, Unix and Windows. The new version has cross-platform support for Oracle, MySQL and ODBC-based databases, and also works with Quicktime streaming media. Revolution is priced at \$295 per seat, and is also included with MandrakeSoft SA's Linux distribution . . . **SUSE Linux Inc.** has shipped **Linux Enterprise Server 7** for IBM Corp.'s 64-bit zSeries and S/390 mainframes. The new version, based on the 2.4.7 kernels, supports IBM's HiperSockets feature, which provides a data pipeline between virtual servers within the mainframe, and also the ▶ continued on page 18

WebPutty Forms Flexibility Platform

BY EDWARD J. CORREIA

WebPutty Inc. last month released a pair of tools that it claims can automatically discover a company's databases, program objects and other software assets, and let developers use them to assemble applications using a browser and without interrupting existing asset relationships. The new Interoperability and Development Suites



Once discovered, business objects can be manipulated visually in WebPutty's Flexibility Platform.

complete the company's Flexibility Platform 5.0, a development framework and application runtime environment for Windows servers.

According to Joshua Weisberg, WebPutty's director of product marketing, one of the biggest challenges a developer faces is managing changes to deployed applications. "The code itself is complicated, with a lot of interdependencies between different layers of code and systems. You could go into Oracle and change the structure of a database and suddenly the Visual Studio logic is busted, and you and your database administrator have to go in and figure out where it broke."

WebPutty (www.webputty.com) helps to solve this problem with the Discovery component of its Interoperability Suite, which Weisberg said abstracts existing software components as it makes them available to the Development Suite. "A good deal of the code in an application is what we call plumbing code; it

deals with the underlying infrastructure. The unique value of the application is only a small percentage of the app, and we've developed a method of separating this out from the platform-specifics by creating a model of the application across all the tiers and tracking all the interdependencies and patterns that exist."

The Discovery module, he continued, permits developers or nontechnical staff to use objects without having to understand their structure. "If it's a database, it will parse stored procedures and understand the relationships. If it's an object, it will get the methods and attributes." All discovered assets appear in the development environment as business objects, he said, and can be used alone or with newly created components.

Weisberg explained that while conventional development tools can mimic what the WebPutty solution does, doing so would be far less efficient. "Visual Studio, which is mainly a middle-tier [tool], also does

some user interface and database stuff. But if you really want to tweak the database, you have to go into SQL Server or Oracle. If you want to mess with the presentation, you might do it in Visual Studio, but you might also do it in Dreamweaver. The problem is that there's no relationship between those applications, and you could easily break something," he cautioned.

That's where the third major component of the Flexibility Platform comes in. Originally released in August 2001, the Flexibility Server is a runtime engine and database for Windows servers that executes all modules and stores all developed applications. "It's a single point of view of control over distributed components regardless of what tier of an application they're on. [The Flexibility Server] tracks all changes and relationships between components and propagates those changes to all related components and application tiers automatically. When you make a change to the database, the server knows all the places that the column, field or table is being used and either updates those things automatically" or warns the developer that he's about to break something.

Flexibility Platform 5.0 is available now; pricing starts at \$150,000 per server. ■

JAVA

◀ continued from page 1

early-access code they've been working with and actually build their applications, ship them or put them into production using the final binaries."

The Java WSDP contains Sun's Java APIs for XML Messaging (JAXM), XML Processing (JAXP), XML Registries (JAXR), XML-based Remote Procedure Calls (JAX-RPC) and JavaServer Pages Standard Tag Library (JSTL), as well as build and deployment tools. Those tools include an installer, Apache's Ant build tool, an Apache Tomcat JSP servlet container, and an XML registry server based on the UDDI specs.

The previous version of the Java WSDP, called Early Access

2, was released this spring, and Kacandes claimed that differences in the final code shouldn't present problems for developers. "We do complete regression testing on everything to make sure that [problems] don't happen," he said.

In the final release, Kacandes said that basic SOAP functionality has been removed from the JAXM API package, and is in its own SOAP with Attachments API (SAAJ), which he said makes it compliant with the JAXM 1.1 specification. Also, he claimed, the separation reduces the memory footprint for applications that only use SOAP and don't require the XML messaging APIs included with JAXM. As a result, he added, the JAX-RPC package now depends only on SAAJ, and has no dependencies on JAXM.

The no-cost kit is expected to be available for download from <http://java.sun.com/webservices/webservicespack.html>, and according to Kacandes, can be run on any servlet container using J2SE 1.3 or later, or J2EE 1.3 or later.

What's next? Kacandes singled out two future Java specifications, currently in progress through the JCP, that aren't included in the Java WSDP, but might be either included in a later revision of the Java WSDP, or shipped as stand-alone APIs.

The first is the Java Architecture for XML Binding, due for preliminary release in August. The other is JavaServer Faces, which he described as a GUI-based rapid application development tool for Web services and Web applications. ■

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Phaos Adds XKMS, SAML Tools to Security Suite

BY CHRISTINA M. PURPI

Phaos Technology Corp. on June 3 was scheduled to add two new components, Phaos XML Key Management Services (XKMS) and Phaos Secu-

rity Assertion Markup Language (SAML), to its XML Security Suite. The products are based on version 1.0 of the W3C and Oasis standards, respectively.

The main focus of these standards and the Security Suite, according to Phaos senior software engineer Ari Kermaier, is to protect the integrity of XML documents.

"Phaos XKMS and Phaos SAML consist of a set of class libraries that constitute the basic components of these various specifications that allow Java programmers to program

in terms of our class libraries rather than having to implement low-level aspects of these protocols themselves," said Roger Sullivan, president of Phaos (www.phaos.com).

The XKMS specification was originally developed mainly by VeriSign Inc. and submitted to the W3C as a technical note, according to Sullivan. "It addresses the problem of getting a hold of keys for signatures. It finds out how to offload the processing burden onto a Web service infrastructure."

Phaos XKMS is able to query a Web service to locate a key for verifying a signature, or to validate a certificate, Sullivan said. It can also generate key pairs and get certificates signed, so the developer doesn't have to know how to deal with the complexities of public key infrastructure.

SAML, on the other hand, is a messaging format to standardize the various kinds of permissions and authorizations that different networks use and to communicate information to one another, explained Sullivan. "It allows clients and servers and trusted third parties to create and exchange credentials having to do with permissions or authentications to access certain services. It's useful for implementing single sign-on services without having to maintain duplicate databases of authorization information."

Sullivan explained that "SAML allows me to present someone else in my organization and say, 'These guys are authorized by my company to do business with you.' It will then send credentials and say, 'Yes, I accept these credentials and will ship your order.'"

The two technologies allow developers to selectively encapsulate or encrypt portions of an XML document and determine which users have the right to access those portions, Sullivan said.

These new tools are built on top of the Phaos XML Security Suite, which must be purchased at a price of \$4,000 per developer seat, in order to utilize XKMS and SAML, priced at \$1,500 and \$500, respectively. ■



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Solaris Compilers Join Sun ONE Studio

New C/C++, FORTRAN tools include debugger

BY ALAN ZEICHICK

Sun Microsystems Inc. expects that developers working with newly released Solaris 9 will be coding in more than Java; along with the updated operating system, the company has shipped a new set of compilers for C/C++ and FORTRAN, and has incorporated them into its Sun ONE Studio product family. Until a new branding initiative earlier this year, Sun ONE Studio was known as Forte.

Now called the "Sun ONE Studio 7 Compiler Collection," these two compilers include an interactive source-level debugger that includes runtime error checking and memory-leak detection features. The debugger also can step between C++ and Java in mixed-mode applications.

According to the company, these 32/64-bit compilers support a subset of the OpenMP C++ 1.0 and OpenMP FORTRAN 2.0 APIs, which are a common set of functions that help developers create parallelized applications for multiprocessing systems without having to write explicit threading calls. In addition, the C++ compiler natively supports the SPLport standard template library.

Sun also said that the FORTRAN compiler is compliant with the FORTRAN 90/95 standards, and has partial support for the still-incomplete FORTRAN 2000 standard, specifically for its

new DECIMAL=, IOMSG=, ROUND= and IEEE keywords. There is no longer a separate FORTRAN 77 compiler, according to Sun, though the new compiler can still work with many of the language extensions specific to that FORTRAN specification.

Also new is that both compilers support interval arithmetic, where a function can be performed on all numbers between an upper and lower range, which Sun claims produces results with guaranteed accuracy and numerical solutions to nonlinear problems, without the accuracy limitations inherent even with double-precision floating point numbers. With FORTRAN, variables are defined as a new type INTERVAL. For C++, Sun provides a C++ header file and library that implements three interval classes for float, double and long double variables.

The new compilers, priced at \$995 each, also include a new serial-number-based licensing system that the company claims makes it easier to move licenses between machines. The compilers create binaries that can be used on Solaris 7, 8 or 9 running on Sun's SPARC processors. However, the code must be compiled on the earliest version of the operating system that the binaries are intended to run on, according to Sun. The company will not be releasing an Intel x86 version of the compilers. ■

TechExcel Creates Enterprise Version of Defect Tracker

BY CHRISTINA M. PURPI

TechExcel Inc. has created a new Enterprise Edition of its DevTrack defect-tracking tool, adding features for larger companies such as test plan automation, advanced workflow with multitasking, event templates and a Web interface that allows for the submission of change requests or bugs directly to the development team.

Products similar to DevTrack's new Enterprise Edition are only Web-based, don't offer sophisticated workflow or the QA test automation and are complex to implement, claimed Jeff Johnstone, director of sales at TechExcel (www.techexcel.com). "DevTrack has more power and a much easier implementation model."

DevTrack Enterprise Edition 5.0 carries a \$7,500 base package price, in addition to a \$645 per-user charge. One of the benefits of the Enterprise Edition, according to Johnstone, is that if a test

fails, DevTrack will automatically create a defect record to determine why it failed.

TechExcel also has updated its original DevTrack product, which has been renamed Standard Edition. The new 5.0 release, still priced at \$445 per user, now includes issue templates that will automatically fill in values and the ability to create detailed and custom reports on reported defects. "Before, you had to go into the back end and write your own reports, which was time consuming," Johnstone explained. "Now they're available to the end user."

Another new version, called Small Business Edition 5.0, has the same functionality as the Standard Edition, according to Johnstone, but is targeted at smaller development teams with 10 or fewer participants. It costs \$295 per user.

All three version 5.0 releases, which run on Windows, were scheduled to ship earlier this month. ■

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Ipedo Puts XML Framework Into Pipeline

BY CHRISTINA M. PURPI

Ipedo Inc. has added Web Express, a framework for the development of Web applications that utilize XML content, to its Dynamic Information Suite.

According to Chris Parkerson, product manager for Ipedo (www.ipedo.com), other companies offer products that attempt to accelerate the building of Web applications, but Web

Express leverages the capabilities of its XML database and introduces a new technique to do XML processing called pipelining. "[Pipelining] enables developers to efficiently work

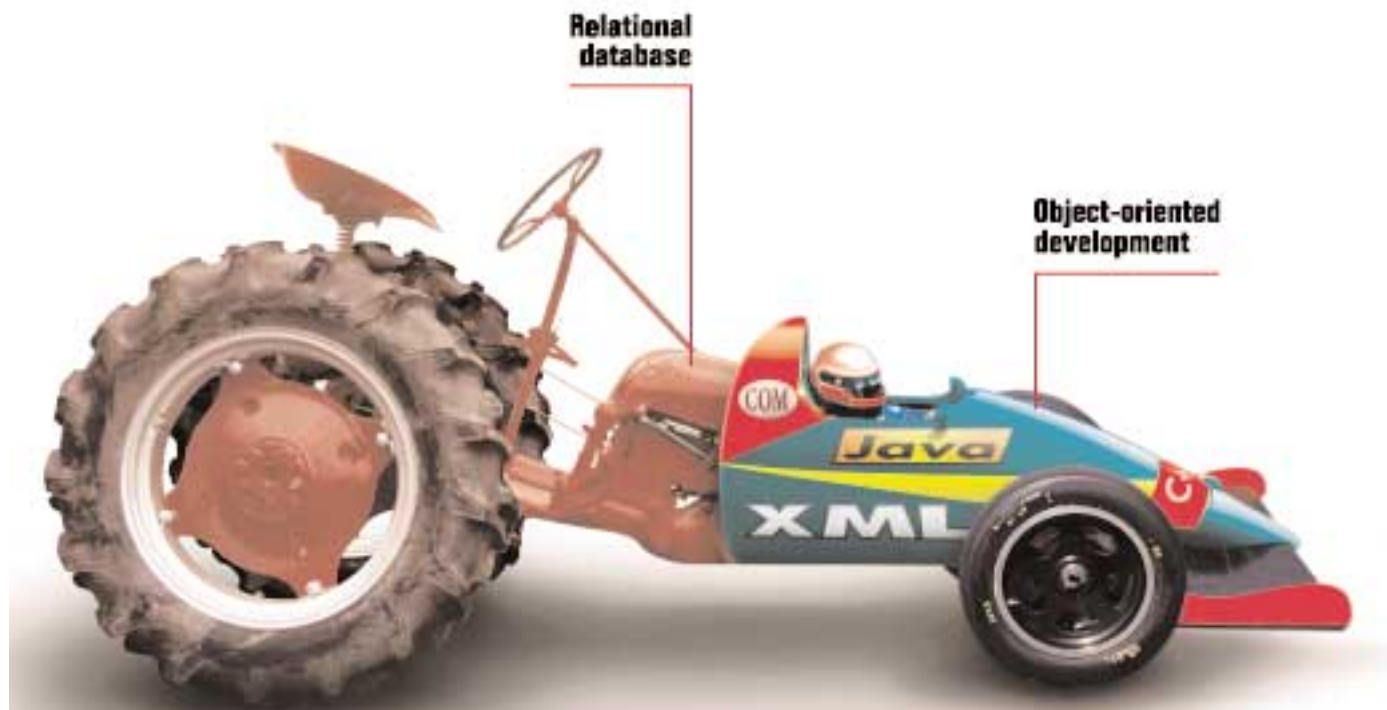
with XML-powered Web applications, instead of being driven by relational databases."

Pipelining, explained Parkerson, allows developers to segment the processing of XML

into several reusable steps. "It's a sequence of XML queries utilizing the XML query engine inside the database. When executed in a named sequence from a JSP or ASP, you just call the sequence by name and it goes into the database, finds the XML according to the query step, then performs the transformation step in sequence, which allows you, when building a Web site, to modularize how the content is going to be published."

Web Express also includes tag libraries for JSP and Active Server Pages to allow it to be used within other Web development tools, such as Macromedia Inc.'s Dreamweaver. "There's no reason to learn a new tool," said Parkerson.

Web Express is currently available for Linux, Solaris and Windows, with support for Mac OS X due by the end of the month, and is free for existing Dynamic Information Suite customers, according to Parkerson. ■



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CYBERMATION'S SCM SOFTWARE ADDS PLATFORMS

BY CHRISTINA M. PURPI

Cybermation Inc. has released version 5.1 of ESP Alchemist, its change management software for OS/390-based mainframes. The new version provides developers with a single point of access to content stored on other platforms, such as AS/400, Linux, Unix and Windows.

Version 5.1 is the first release of this product from Cybermation (www.cybermation.com), which acquired the product from Sequel UK, a consulting company. The emphasis on other platforms is new for this mainframe-only product, said Robert Kennedy, product manager for ESP Alchemist.

Kennedy explained that this single point of control stems from agents—small kernels of code running on the nonhost systems. "What Alchemist does is it manages the deployment of changes to target servers. You would talk to the front end through clients on a mainframe or other boxes via the Web client, and it will then deploy changes out to any or all of your boxes exploiting these agents or the underlying communication infrastructure."

ESP Alchemist 5.1 is available now; Kennedy refused to provide pricing information. ■

Alcea's Fast BugTrack 2.0 Gives Users More Control

BY EDWARD J. CORREIA

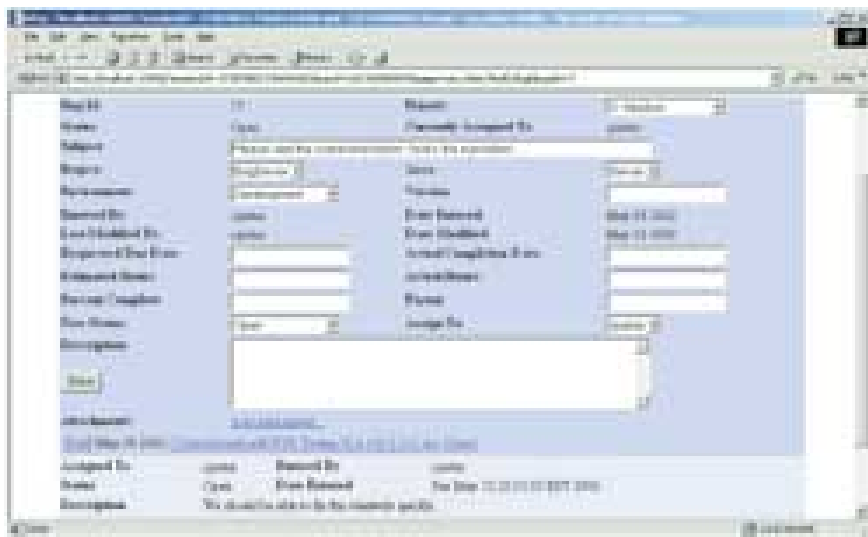
Alcea Technologies Inc. has released Fast BugTrack 2.0, and claims that the latest version of its Web-based defect tracking software now permits developers to change the interface and control access to bug data by user and group, and offers enhancements to database searching.

According to Chris Justus, Alcea's director of software development, one of the most significant new features is support for Cascading Style Sheets. "Because we're using Style Sheets, you can change the whole look and feel of the system to match your Web pages," he said. Users also now can add new fields, change field labels, and control background and text color schemes and page graphics. Field order cannot be changed, he added.

What sets Fast BugTrack apart from competitors, Justus asserted, is its use of

an integrated database and Web server. "You don't need to integrate it with any other software; that makes it simple to install and configure. With other systems, you've got to integrate with [Microsoft's] IIS and some database." The new version also offers full text search and can save and retrieve search filters.

Justus said that at \$349 per site, Fast BugTrack competes on price as well. "In most cases, competitors are priced by the number of users. Ours is a flat fee, and you don't have to dedicate a server." He said that in a typical installation, which usually has fewer than 100 users, one person on the development team runs the software on his machine and others simply point their browsers to it. Fast BugTrack 2.0 is available now by download only at www.alceatech.com/bugtrack/Download.shtml. ■



Alcea's Web-based defect tracking software permits customization of many interface components.

CHANGEMAN UNDERGOES CHANGE

Serena adds third-party, platform support in SCM tool

BY DAVID RUBINSTEIN

Serena Software Inc. last week announced significant revisions to its ChangeMan line of change management products with support for additional development tools, standards and platforms.

"The rate of change is happening faster and faster within a very complex [IT] environment," asserted Tony Stayner, Serena's marketing vice president. "Our view of enterprise change management is to offer a single point of control for changes from the mainframe to the Web."

Among the enhancements in ChangeMan DS 5.5, for distributed systems, and ALM 3.2, for application life-cycle management, is what Stayner called industry-first support for SAP R/3 applications. "They were a proprietary repository that wouldn't let in SCM vendors or play nicely," he said. "Now, you can coordinate SAP and non-SAP changes."

Stayner added that rollback capabili-

ty has been added to ChangeMan DS versioning. Support also has been added to DS and ALM for IBM Corp.'s zSeries Linux and HP/Compaq's Tandem servers, and ALM integration has been enhanced with Mercury Interactive Corp.'s Test Director, Microsoft Corp.'s Project management tool and development environments such as Borland Software Corp.'s JBuilder, IBM's WebSphere Studio and SlickEdit Inc.'s Visual SlickEdit.

In its ChangeMan ZMF 5.3 for mainframes, Serena (www.serena.com) has added published APIs for XML services for tighter third-party integration, and has built in the enterprise release management capabilities of DS, enabling enterprise development teams to manage complex release schedules. "The release management piece was better on the distributed side, so we beefed it up on the mainframe," Stayner acknowledged. ■

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ORACLE

← continued from page 1

ing the other tools individually, said Dwight.

Oracle also is introducing new tools and components as part of the suite, which was timed to follow shortly after the introduction of Oracle9i Application Server Release 2, said Dwight, and in anticipation of Oracle9i Database Release 2, expected to be shipped in June.

New to the developer suite is Oracle9i SCM, a repository-based software configuration manager. "It supports all of our tools, obviously, so you have integration right off the menu. It also supports branching, versioning [and] source control, and can manage any kind of project file or artifact," Dwight said.

Dwight also said that Oracle is seeing more developers working with traditional business-intelligence functions, and has responded by adding those functions to the suite. "You build a JSP application, and then right away you have to write a report on the transactions you're doing," he said, indicating that the inclusion of business-intelligence functions would simplify

this process. Previously, Oracle has had its own business-intelligence tools.

"Now, we're including Business Intelligence Beans, or BI Beans, in the suite. These are JavaBeans that offer all the functionality that previously developers would have had to turn to a formal business-intelligence tool to get," Dwight claimed. "For example, there are beans for charting [and] graphics and presenting different kinds of reports, either in pure Java or in HTML. There is also ad hoc query and analysis capability, offering spreadsheet-like functions on live data. Because we deliver these as JavaBeans, it's much easier for Java developers to just plop in the right BI Bean for what they need to deliver." The BI Beans can be used with both JDeveloper and with Oracle Forms, the PL/SQL tool, he added.

Also new is a ClickStream intelligence tool, which Dwight described as a way to analyze user activity on a Web site; developers would set up the reports they want to see, and the pages that they want to be tracked. Integration is another key point, he added, touting

JDeveloper's one-button deployment of Java applications and Web services to the updated 9iAS Release 2 application server. "If you build a Web service, we'll generate the WSDL and the SOAP that you'll need, and you can easily register it with the SOAP server in 9iAS. Similarly, you can model business processes with a UML model, and generate out the workflow code for 9iAS."

LINUX

← continued from page 1

from reduced development costs," and by eliminating the need to pitch certification for their distribution to hardware and software vendors, a necessary step in making a distribution more desirable to customers, he said. "Anybody that certifies on any distribution, be it SuSE, Turbolinux or Conectiva, in any geography, is immediately certified on our product," he said.

Porritt asserted that the move also will serve hardware and software vendors. "ISVs have said they are tired of supporting a half-dozen or more distributions."

According to Holger Dyroff,

The new tool suite offers compatibility with non-Oracle J2EE app servers. But Dwight admitted, "It's fair to say that most developers using Oracle's tools are using Oracle's platforms, but we're also supporting developers using BEA's WebLogic."

Dwight noted that Oracle will ship Oracle9i Database Release 2 later this month; it was already made available to Ora-

cle Technology Network subscribers through an Early Access Program in late May. The new version, he said, focuses on improving XML capabilities in the database, such as to allow storing, retrieving and searching using the SQLX and XPath query languages. "With this release there are a lot of new features for OLAP, and the BI Beans take advantage of these new OLAP functions," he said. ■

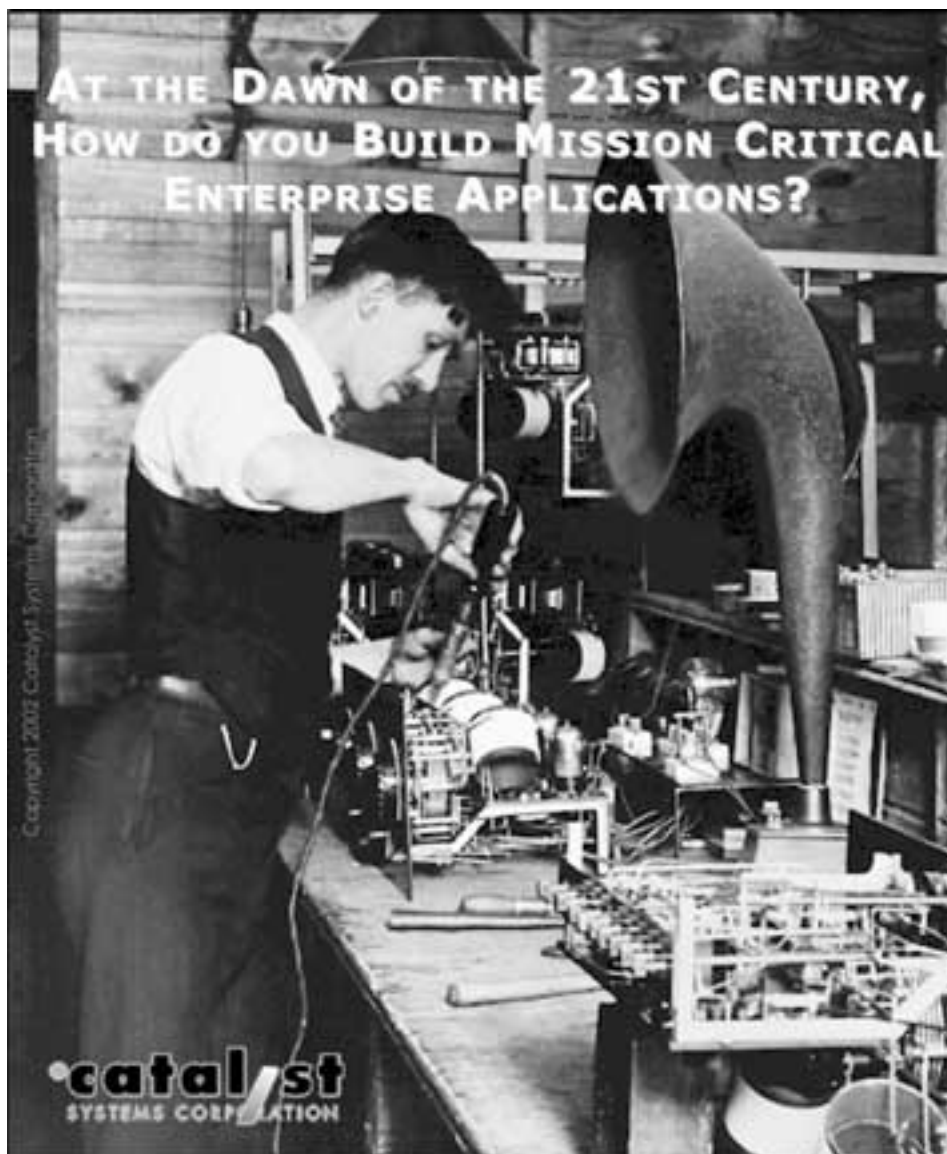
who runs SuSE's North American operations, it's a particularly nice deal for his company. "SuSE will serve as the technical integrator, and do most of the core development, project management and quality assurance for UnitedLinux," he said, adding that SuSE also will shoulder most of the development costs. In exchange, SuSE gets a cut of sales from the other partners and doesn't have to change its development plans very much. SuSE will continue to develop its consumer version as is; and when version 8 of its enterprise edition is released later this year, it will become the codebase for UnitedLinux, he said.

Benoy Tamang, Caldera's vice president of corporate develop-

ment, said that Dyroff's assessment was not entirely fair. "Caldera and SuSE have the most engineers on this. All of us are adding in technologies and labor, and we are looking toward creating a product with aggregate talent and [each company's] unique elements." He declined to provide specifics.

Dyroff said that in addition to standardizing on the compiler, glibc [runtime libraries] and the kernel, which he called the starting point for certification, the effort will attempt to unite the software installer and the windowing GUI. "Right now, we are looking at KDE to be the default version." An alpha version of UnitedLinux is scheduled for late summer. ■

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News Briefs

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ReiserFS journaling file system. Pricing starts at \$14,500 for a single-processor configuration . . . IBM Corp.'s updated **WebSphere Portal Server** is set to ship at the end of June. Version 4.1 offers tighter integration with the WebSphere app server, and the ability for users to publish portlets that can be accessed as a Web service. The new version also has stronger encryption for the content vault . . . iAnywhere Solutions, a subsidiary of Sybase Inc., has a new **Mobile Starter Kit** that includes its **SQL Anywhere Studio 8.0**, PenRight Corp.'s **Mobile-Builder 2.1** development tool, and a handheld computer from Casio Inc. The price is \$1,599 with a **Cassiopeia EG-800** handheld, or \$2,599 with a **Cassiopeia IT-700** . . . Open Source Development Lab, a nonprofit vendor consortium, has a new Web-based performance test suite for Linux. The **OSDL Data Base Test Suite** is designed to let developers test the effects of kernel changes on transaction application performance . . . Sybase Inc. has ported its **Adaptive Server Enterprise** version 12.5 to Mac OS X. The new database release supports applications built with Apple Computer Inc.'s WebObjects app framework . . . Cleanscape Software International is now reselling Telcordia Applied Research's **TSVAT** testing system in the U.S. under the **Testwise** name. The software, which runs on Linux, Unix or Windows, performs coverage analysis, regression testing, static and performance analysis, and dynamic debugging. Testwise is priced at \$3,490 per developer seat . . . SpiritSoft Ltd. has announced that its **Spirit-Wave 5.1** Java messaging middleware has achieved J2EE 1.3 certification . . . Precise Software Solutions Ltd. has updated its **Precise InDepth** database performance management suite for DB2. Version 2.0 lets database developers look at both long-term and immediate performance statistics, and offers recommendations for index changes. It also lets developers simulate app performance after a database change has been made . . . Accelerated Technology, a subsidiary of Mentor Graphics Corp., has released a version of its **CodeLab** embedded development suite for Hitachi Ltd.'s **SuperH** microprocessors and a version for designs using ARM-based processor cores. The suites are priced at \$4,495 per developer seat for SuperH and \$3,495 for ARM . . . Vita Nuova Holdings is offering the fourth edition of Bell Labs' **Plan 9** operating system as a boxed set with software and printed documentation, for \$150. The fourth edition contains a new file system, optimized kernel and new libraries . . . AppForge Inc. has released **MobileVB**, the latest version of its newly renamed add-on to Microsoft Corp.'s Visual Basic that permits developers to target handheld computers, mobile phones and other devices running Palm OS, Pocket PC and now Symbian OS. The tool sells for \$899 per developer seat, plus a \$10 runtime royalty for Pocket PC applications.

PEOPLE

Software-reuse author **Wayne Lin** has been hired by Flashline Inc. as its director of market development and professional services. He previously served as managing director of Lombard Hill Group, a consultancy . . . OSE Systems Inc., a subsidiary of Enea Data AB, has consolidated its sales into one organization, headed by **Christophe Ballan**, newly promoted to EVP of worldwide sales. Previously, Ballan headed European sales.

STANDARDS

Sun Microsystems Inc.'s Java Community Process has released Community Review Draft Specs for JSR-73 **Data Mining API**, JSR-112 **J2EE Connector Architecture** and JSR-153 **Enterprise JavaBeans 2.1**. There are new public review drafts of JSR-86 **Enterprise Media Beans**, JSR-109 **Implementing Enterprise Web Services** and JSR-116 **SIP Servlet API**, and proposed final draft specs of JSR-52 **Standard Tag Library for JavaServer Pages** and of JSR-101 **Java APIs for XML-based RPC**. The JCP has issued final release drafts of JSR-34 **Java Advanced Imaging API 1.1** and JSR-131 **ECperf 1.1** and has formally approved JSR-181 **Web Services Metadata** and JSR-183 **Web Services Message Security APIs**. ■

PALM

← continued from page 1

the first three months of this year.

Though admitting that Palm OS sales have slipped steadily over the past two years, Michael Mace, chief competitive officer at PalmSource (www.palmsource.com), claimed that sales have spiked recently and is optimistic about the effect the June 11 release of Palm OS 5 will have on sales. "In U.S. retail sales, we've gone up about 10 share points since February... and we expect Palm OS 5 to build on that momentum because it lets our licensees create more diverse hardware."

Dave Horwich, president and CEO of independent software vendor Neohand Inc., said that sales of applications for Palm OS have been susceptible to Palm's missteps, including the debacle surrounding the release of its m505 device early last year. "First they announce a new product that wasn't even ready yet, thus slashing demand for their existing products. Then, although the m505 had a nice form factor, the color screen proved to be inadequate, especially when compared to the Sony Clies that were announced the following week."

According to Gartner's Kort, the same problem may exist today surrounding the release of Palm OS 5. "The fact that people are starting to look forward to the Palm OS 5 devices might be slowing down some purchases," he said. This phenomenon is common, he added, particularly when the newer technology is expected to significantly outperform current offerings. "Even though existing applications will be running through emulation, the new [ARM-based] hardware is going to be so much faster. If I were in the Palm market right now, I would probably be waiting," he added.

Where Palm has stumbled, Microsoft has made advances,

according to Horwich. "Some of the security aspects that will finally make their way into OS 5 should have been addressed earlier on. Standardized high-resolution support is finally making its way in, after more than a year of three differing standards," he said, adding that although device expansion was introduced with Palm OS 4.0 last year, it "certainly isn't seamless. We've looked into enabling support for expansion cards and [found that it] would be quite a hassle development-wise because of the way the expansion architecture was designed. These are all areas where Microsoft has made progress."

Horwich, whose company

Palm OS Licensees:

Acer	Nokia
AlphaSmart	Palm
Garmin	Samsung
HandEra	Sony
Handspring	Symbol
Kyocera	

Source: www.palmos.com/licensees

Pocket PC Licensees:

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Casio	Inventec
Cesscomm	Mitsubishi
Compal	NEC USA
ETEN	O2
Fujitsu	SAGEM
HP/Compaq	Siemens
Hi-Tech Wealth	Symbol
HTC	Toshiba
Itautec	

Source: Microsoft Corp.

develops software for both Palm and Pocket PC, added that from an enterprise perspective, targeting a Microsoft platform is usually a safe bet. "You're seeing [Microsoft] devices being accepted into more corporations. It's like that old adage: 'Nobody gets fired for buying IBM.' The same thing holds true for Microsoft." Kort agreed, but for different reasons. He contrasted Microsoft and Palm licensees: "When an IT manager buys a PDA, there's

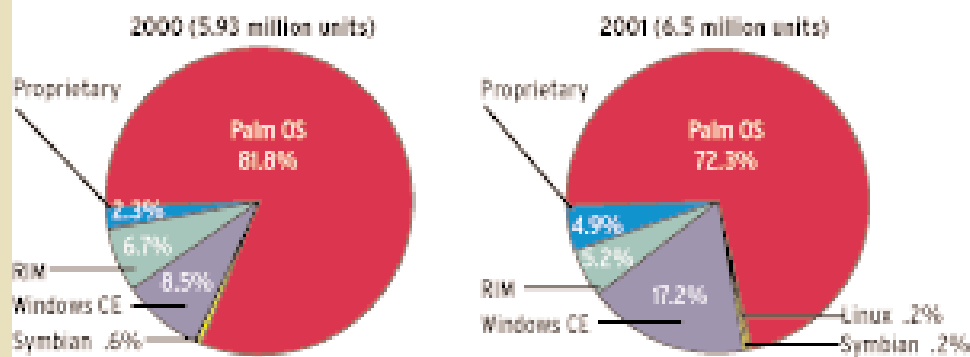
comfort in knowing that Compaq has offices all over the world and can get them a replacement in a day or two. With Handspring, they might have to send [a defective unit] to the U.K. and wait a week or more."

Longtime Palm developer Wayne Riggs said he has been unexpectedly confronted by more abundant Pocket PCs, despite corporate clients that say they have standardized on Palm. "They might say they are using only Palm, but then some VP walks in with his Pocket PC and asks what it takes to get the app on it." Riggs is president of Doublejack Computing Inc., an independent software vendor.

Research in Motion Ltd., whose proprietary Blackberry handheld operating system lost about 1.5 share points between 2000 and 2001, suffered from network and device migration problems, according to Kort. "RIM had a bad quarter, and is going through a tough transition migrating off Mobitex network and onto GPRS, and it's not happening as fast as they would like. Their units have dropped off significantly from a year ago. Plus, you'll need the new [5800 series] devices for the new packet switched networks, and they cost \$500 each."

Will Microsoft overtake Palm? Kort said no, simply due to costs. "The problem with Pocket PC is that the cheapest list price for a device is \$399, and until Pocket PC players figure a way to get the prices down, Palm will be somewhat protected. Not many people are plunking down \$400 of their own money for these convenience items." Pricing for Palm's current devices starts at around \$99. As for future devices, Mace said: "ARM chips come in a variety of price points, so devices will range from very inexpensive to very powerful." The company declined to provide specific prices for its own forthcoming ARM-based devices. ■

U.S. Handheld Market Share



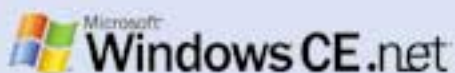
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Idelix Brings Graphics Into Focus

BY EDWARD J. CORREIA

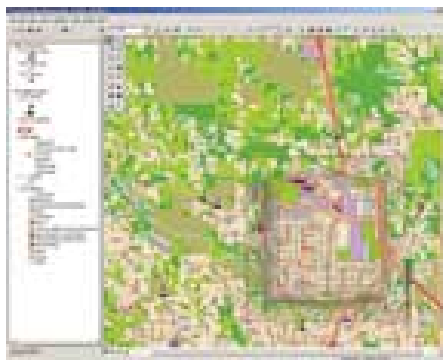
For developers challenged with building graphics-intensive applications for handheld devices, a new solution may be worth a look. Last month, Idelix Software Inc. released the Pliable Display Technology SDK 2.0, the latest version of its on-screen graphics display tools for C/C++ that the company says offers such improvements to performance that hardware graphics accelerators are no longer necessary.

According to David Baar, CTO and founder of Idelix (www.idelix.com), Pliable Display Technology provides an API that permits developers to "produce a more efficient way of dealing with the massive amounts of information they need to look at on-screen." This includes ways to apply

"lenses" to isolated areas of an image and zoom in to display more detail. Unlike simple magnification, the tools "add in-context magnification," Baar said, which he claimed optimally distributes the information being displayed. "What simple magnifiers do is just stretch what you see on-screen. They're not

pulling up new detail into a lens or a separate view," he said. Image data can include raster, vector or text. Target markets for the imaging tools include defense, health care, CAD, digital imaging and geographic information systems.

Baar said among the most significant new features is the



The company claims that faster rendering now permits targeting of handheld computers.

multidimensional lens controls (MDLC), which he explained are predeveloped user interface controls for manipulating lenses and adjusting image magnification. "They give the developer a nice way of providing [users with] a convenient user interface."

Also new is Warp Renderer,

the performance-enhanced rendering engine that Baar claimed eliminates the need for hardware acceleration on the target device and opens the door to applications that target resource-constrained devices. "With version 1.0, you had to have hardware acceleration such as OpenGL to get good real-time performance with our lenses. To go into handhelds and conventional PCs where you can't rely on 3D acceleration being there, we've come out with Warp Renderer, a specialized rastering engine. We actually have Idelix working on an iPAQ now."

Baar explained that in its simplest manner of integration, a developer might integrate the

Idelix software in line with an existing application's display functions. "In most cases, the developer will already have a raster prepared. They first send their raster through our engine. When it comes out, it goes back into their display and is delivered to the screen. Extra considerations [come into play] for pulling up extra detail for magnification and for wiring back into the application's own logic for doing image editing, measurement or whatever."



PDT provides much more than simple magnification, says Idelix's Baar.

Available now for Linux, Unix and Windows workstations and targets, the Pliable Display Technology SDK 2.0 is free; royalty-based pricing is \$250 per seat with a minimum purchase of 1,000 seats. ■

Bankrupt Zilog Focuses on Engineering, R&D

Chapter 11 plan converts debt into common stock, unloads FAB

BY EDWARD J. CORREIA

It's business as usual for embedded chip maker Zilog Inc. Despite filing for Chapter 11 bankruptcy in February, the company will remain in business after its plan for reorganization was approved by California's bankruptcy court in April.

Moreover, according to Zilog CFO Perry Grace, the company showed first-quarter profits of "a couple of million dollars, for the first time since 1999."

Grace explained that under the plan, Zilog converted \$280 million in bondholder debt to 28 million shares of common stock traded over the counter for about \$4. "We've restructured the debt and converted debt holders into equity [hold-

ers]." Grace added that the benefit to debt holders, who voted unanimously in favor of the plan, "is an opportunity to salvage some value from a debt perspective that converts to equity in Zilog. The question then becomes, 'Are you prepared to take a bet on Zilog?'"

Though somewhat unconventional, the decision to file a reorganization package rather than for full protection from creditors was the best one for Zilog (www.zilog.com), claimed Grace. "You can go into Chapter 11 immediately and hide to protect yourself, doing all the negotiations under the chapter umbrella, or you can take a prepackaged [approach]," which he explained simply means

constructing a reorganization arrangement prior to filing with the courts, making sure all the creditors were heard. "That was the cleanest, easiest and fastest way to get in and out of a chapter process." There will be no employee layoffs, he added.

Grace said Zilog originally acquired the debt in 1998 when it sold bonds to raise cash for a \$200 million chip fabrication facility. Never quite able to keep the plant at full capacity, last January the company put it up for sale and

dropped its assets into subsidiary Zilog MOD III Inc. Once the factory sells, explained Grace, the plan calls for the first \$30 million of the sale's proceeds to be distributed to bondholders—"in the spirit of returning some of the investments back to those that invested in the original strategy," Grace said, adding that without the cash vacuum, Zilog can now return its focus to engineering and R&D. ■

ESPIAL DRIVES INTO TELEMATICS

BY EDWARD J. CORREIA

Later this month, embedded Java developer Espial Group Inc. is scheduled to release its Suite for Telematics, a set of applications and an SDK targeting motor-vehicle applications that it claims gives developers everything needed to build, deploy and manage applications destined for motor vehicles.

According to the company (www.espial.com), the suite includes versions of the company's Espresso Java SDK and DeviceTop runtime environment compliant with the Open Systems Gateway initiative, a multivendor effort to standardize device communications. Using OSGi specifications, applications and updates can be

safely deployed to remote devices without interfering with existing operations. The suite also reportedly includes browser and e-mail applications, and integration with DeviceServer, the company's device management and content delivery system. Target applications include vehicle navigation, logistics and entertainment. Pricing starts at around \$50,000 with support. ■

iAnywhere Suite to Build App-Specific Databases

Company drops royalty for nonsynchronizing ASDs, adds Visual Basic repertoire

BY EDWARD J. CORREIA

iAnywhere Solutions is working on a set of components that it says will permit Visual Basic and Java developers to build application-specific databases (ASDs) that can either stand alone or synchronize with back-end databases. Previously, development was limited to C/C++ and SQL and required a purchase

of iAnywhere's development environment. The company also says it will drop its royalty requirement for ASDs that do not synchronize.

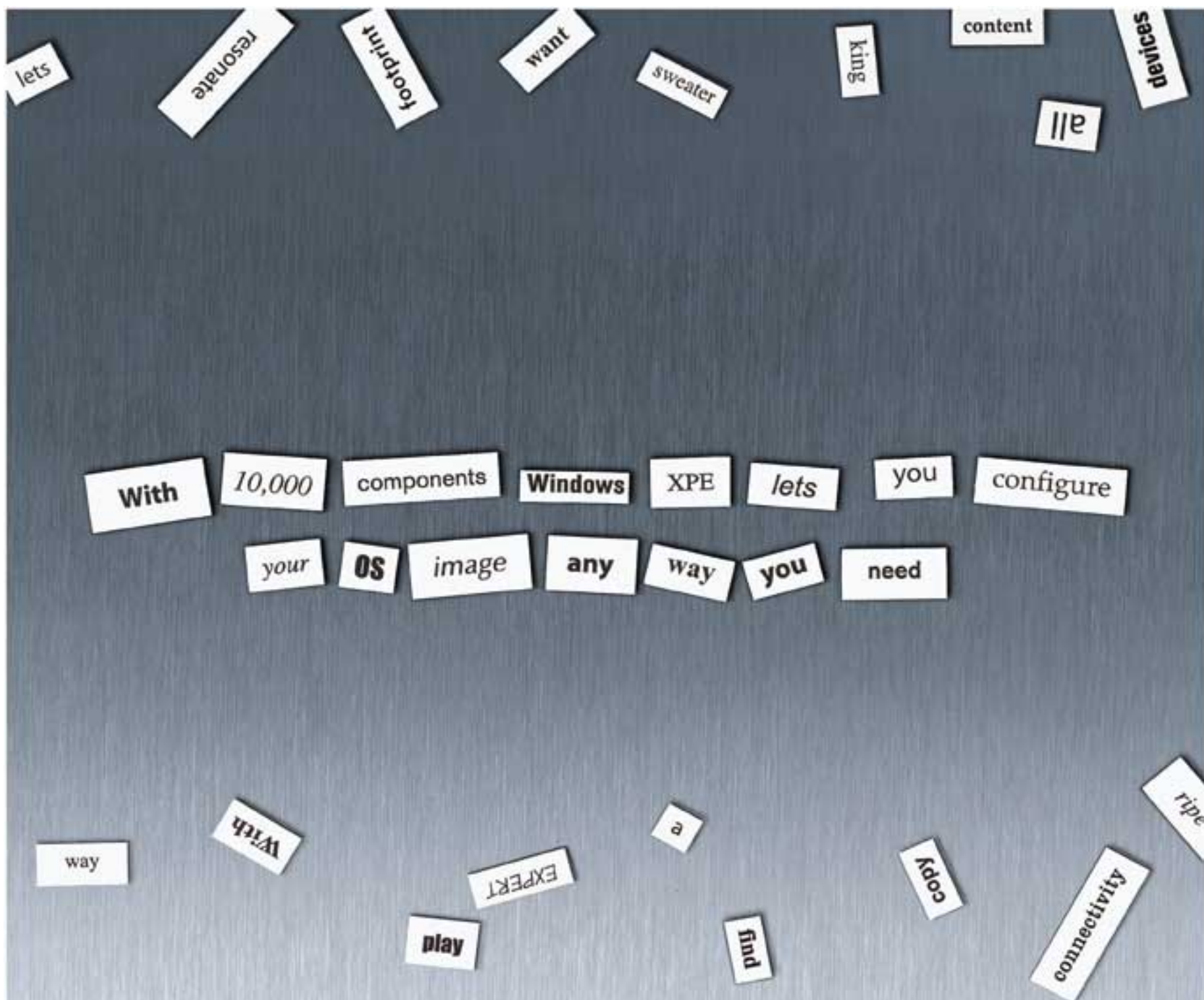
Dubbed the UltraLite Component Suite, it reportedly will include reusable components for Microsoft's Visual Basic and Embedded VB environments, and another for App-

Forge Inc.'s MobileVB, an add-on to Visual Basic that targets Palm OS, Pocket PC and Symbian OS. The company also says it has developed a Java class for targeting Insignia's Jeode JVM through the Java Native Interface.

According to Mike Paola, group product manager at iAnywhere (www.iAnywhere.com),

which is a subsidiary of Sybase Inc., developers will no longer need to purchase and learn iAnywhere's IDE to build ASDs for handheld devices. "In the past, the database and synchronization development tools were C/C++-based. We're now broadening our UltraLite development tools to a whole new class of developers who have

not used C/C++ or Embedded SQL in the past." To build synchronized solutions, which he said can link with DB2, Oracle, SQL Server or Sybase databases, developers still need to use the company's \$395 SQL Anywhere Studio and MobileLink tools. The UltraLite Component Suite is currently in beta and scheduled for release by year's end. Pricing for the suite was not disclosed; the royalty for synchronized apps will start at \$119, the company said. ■



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Microsoft

EAI: It's About Gaining Access

While many vendors claim to offer integration solutions, the basic need of getting at host data, logic remains

BY DAVID RUBINSTEIN

Enterprise application integration (EAI) has come to mean many things to many people. A vendor that offers XML transformation engines says it provides EAI. Message-oriented middleware companies that provide information delivery have put their flags in the ground in the EAI space. App server companies claim to be the foundation of all integration. Web services already are being touted as the ultimate integration solution.

But analysts and users alike agree on one thing: The need for integration between multitiered applications and external systems such as host applications running on minicomputers and mainframes is increasing in today's ever more tightly interwoven world. Indeed, it seems that nearly every software component, tool or platform vendor is positioning its product as an integration solution.

"To say you're an integration provider today, you might as well say you're a software provider, that's how little detail you get from that description," said Shaun Wolfe, president and COO of WRQ Inc. (www.wrq.com), which provides terminal emulation and other host-access software. "Integration is many things, but people say, 'I have a message bus so customers can do self-service on the Web,' when there's a world of work to be done between

those two statements. If a vendor has one element [of EAI], they claim the whole pie, and that's a disservice" to customers, he said.

"Many products are attempting to capitalize on the EAI message," added Mark Haynie, vice president for enterprise extension at Micro Focus International Ltd. (www.microfocus.com). "EAI has been blurred. They might be talking up an app server, which they say can take apps, rewrite them in Java and run on any server and—voila!—they call it integration." Micro Focus sells development and migration tools for mainframe developers.

As distributed architectures came into favor in the corporate world, companies thought about moving off their mainframes, which are very expensive to maintain, according to several EAI solution vendors. But what these companies are finding is that they cannot easily replace their mainframes or move the data they hold onto other systems. So it is the repurposing of the data and logic for use in distributed applications and even Web services that the companies and these vendors now are focusing on. "That's the key, extending the life of these systems by using the same information in new constituencies" said Larry Schuiski, vice president of development at Attachmate Corp.

To Wolfe and others, EAI exists

to take things built a long time ago and make them available for today's disparate systems. "The question is: How do you take something that was written 20 years ago and make it a component for a composite application?" asked Wolfe.

REDUNDANCY FOREVER

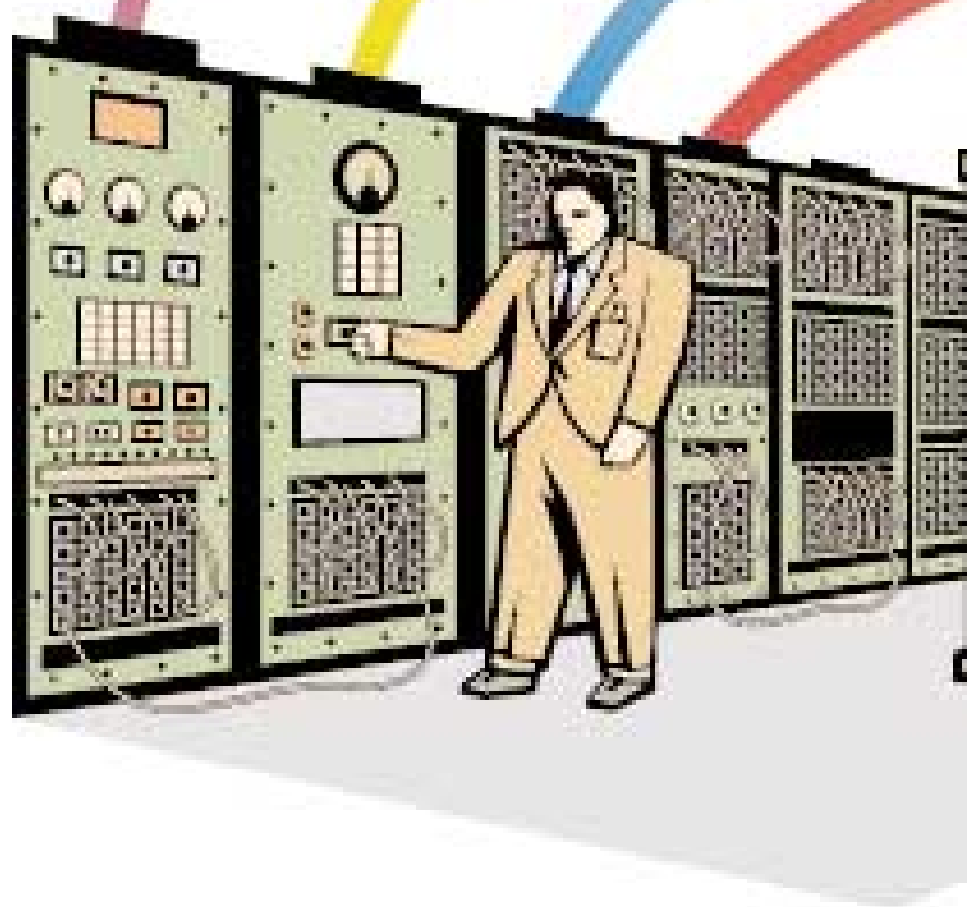
Application integration, according to Gartner Inc. analyst Roy Schulte, is based, in part, on an acceptance of the fact that organizations never will rid themselves of redundant data. "The laws of business dynamics won't allow it," he said. "They've been trying to get rid of it for many years and haven't been able to. It's like trying to sail directly into the wind. You can't, but you can get there by tacking."

According to Micro Focus's Haynie,

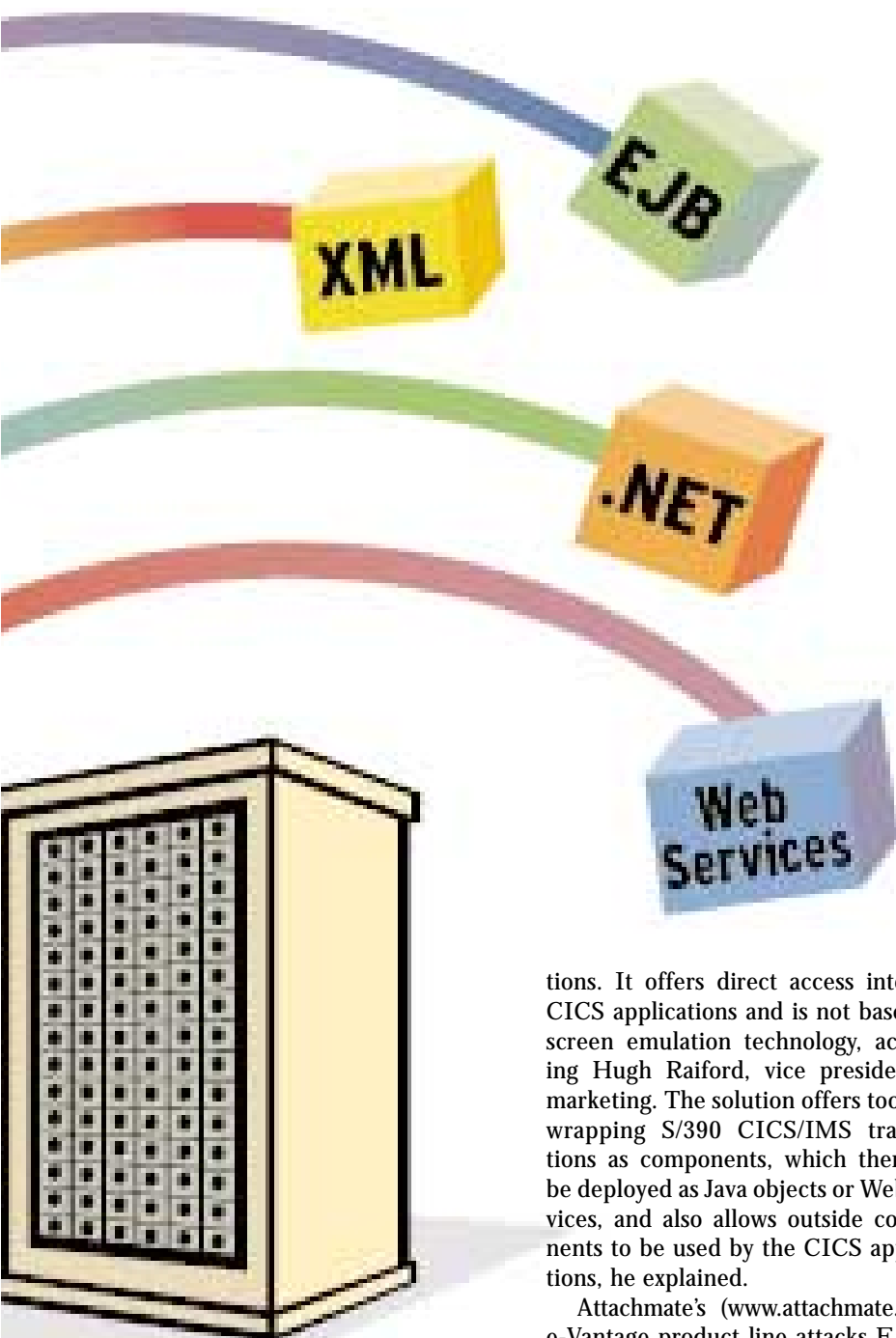
EAI as it was done in the 1980s and early 1990s involved the creation of data warehouses and data marts, offloading data from mainframes onto other systems, and creating object broker interfaces. "Vendors would either proclaim an EAI API and want everyone to code to that, or urge you to offload data from the mainframe to another environment. Both approaches are bad."

But there is more than one way to solve an integration problem, and while each vendor claims to have a somewhat unique take on the solution, all allow for the creation of components from legacy applications to be reused in distributed applications.

For example, Micro Focus believes companies should leave the data and applications where they make the most



The term 'integration provider' isn't descriptive enough, says WRQ's Wolfe.



tions. It offers direct access into the CICS applications and is not based on screen emulation technology, according to Hugh Raiford, vice president of marketing. The solution offers tools for wrapping S/390 CICS/IMS transactions as components, which then can be deployed as Java objects or Web services, and also allows outside components to be used by the CICS applications, he explained.

Attachmate's (www.attachmate.com) e-Vantage product line attacks EAI by allowing developers to "host-enable" the Web with drag-and-drop tools to create Web pages with information from components created from extracted mainframe information, said Schuiski. e-Vantage Enterprise Access Objects for Java acts as an object-oriented conduit through which clients can access legacy information in real time, the company claims.

WRQ, meanwhile, emphasizes componentizing terminal sessions and CICS apps so as not to change the fundamentals, but to assemble the information in a way that is familiar to the end user, Wolfe explained. "We take any type of legacy thing and make them into logical components," he said, referring to the company's Verastream and Reflections products. "Now you can build composite applications from those services." Wolfe believes three elements define true EAI: internal application integration that provides a single view to disparate things, the automatic exchange of information with a partner, and the ability to provide self-service to an end consumer.

sense to the organization. It sells its Enterprise Link integration server along with a component generator, which Haynie said can be used to capture host CICS screens that can be mapped into objects, files or Web pages. It can also turn those captured sessions into reusable components, making them available in different forms by adding the protocols during assembly and not hard-coding them into the applications, providing greater flexibility.

By contrast, ClientSoft Inc. (www.clientsoft.com), which had approached the problem by creating a RAD tool for repurposing host applications, acquired French company Tanit Object in January, and now offers ClientSoft Tanit Objects, which it calls a development environment and run-time environment for CICS transac-

SEGMENTED OR WHOLE

Many of the host-access vendors admitted they cannot provide total integration solutions, because the aspects of integration are so vast that no vendor can have expertise in all areas. In fact, some expect the EAI market to break into segments, such as data warehousing and ETL, terminal emulation or providing direct access into the host systems—not to mention integration business processes or enabling application assembly. "Saying you're an EAI vendor doesn't tell me anything," WRQ's Wolfe said. "What specifically do you do? Which part of the layer do you provide?"

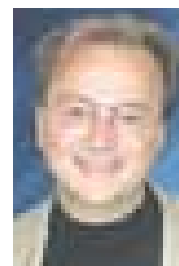
Two longtime players in the space, though, TIBCO Software Inc. (www.tibco.com) and Vitria Technology Inc. (www.vitria.com), do not agree the market is breaking into segments, and claim they offer end-to-end integration solutions. "Who wants to integrate their integration solution before they can integrate their applications," asked Vitria CTO Dale Skeen. "With the major integration players, there is a drive toward comprehensiveness. The problems are varied and cross a wide gamut. There are some integrations that will remain niche, such as data warehousing and screen-scraping," he said. "But it's much less true today" that no company offers end-to-end EAI, even as Skeen acknowledged that part of Vitria's end-

to-end offering uses third-party tools for the "niche" integration problems. "EAI can't stand alone," Skeen said. "It must be coupled with business-to-business integration."

While transport protocols such as SOAP and HTTP make it easier to have connectivity, Skeen said, it does not solve business-level integration. "There are the problems of business vocabulary integration, what do things mean; and business process integration, to flow an order through."

TIBCO director of products Andrea Eubanks said "a toe in XML or a wrapper" is the tip of the integration iceberg. "You need the ability to integrate disparate applications and provide a flexible architecture so new and existing applications can be shared without changes to code."

According to Gartner's Schulte, the competition in the EAI market will be focusing on creating value-added features. "It's business process management, adapters and adapter-building tools, administration tools and config tools," he said. "The basic transportation, transformation and routing will be widely available at a low price." One of the big drivers in the market, according to Schulte, is what he called "straight-through processing," which allows a transaction to follow a business process through multiple steps, without human intervention, and never having to rekey the data. Schulte said



EAI must be coupled with business integration, says Vitria's Skeen.

Web Services: EAI's Newest Battleground

Vendors claim architecture creates need for deeper, more sophisticated integrations

BY DAVID RUBINSTEIN

The Web services arena will be EAI's next big battleground. According to industry veterans, Web services will create more work for integrators than traditional EAI techniques, which are often based on terminal emulation, electronic data interchange and other forms of one-on-one host access.

"There's only some agreement on Web services, and the standards are incomplete," said Gartner Inc. analyst Roy Schulte. "And there are some protocol issues that won't be solved at all by Web services, and such things as business process management, transactions, security, failover and redundancy."

In fact, several vendors already see a growth in opportunity created by Web services. "When XML came out,

people said the data integration market would fall off, but there's still a lot of work converting EDI and creating interfaces for mainframes," said Shaun Wolfe, president and COO of WRQ Inc. "The semantic problem for XML still is an integration problem. XML is to databases as Web services are to processes. It'll accelerate the integration market."

Part of the problem, according to Attachmate Corp. senior vice president of development Larry Schuiski, is that applications must be retooled before being exposed as Web services. "Say you want to offer home banking on the Web.

The issue is, it was designed for trusted employees to access the data. Now, you still need to have some access to



EAI companies are emphasizing Web services, says ClientSoft's Raiford.

► continued on page 24

► continued on page 24

GAINING ACCESS

◀ continued from page 23

this is catching on in the health-care and financial sectors.

Gartner (www.gartner.com) calls the new foundation for EAI and B-to-B the "enterprise nervous system," which Schulte said has enormous

implications for the design and development of applications. "There's a lot of data applicable to more than one app system. If you build in the intelligence, you'll have the problem of redundant data. Also, you can't do business process management in only one application system. It really lies in the

seams or boundaries" between systems. By putting the data and logic outside the application system, they reside in the network but not in any end-point app systems, he explained.

"Everybody's moving to this," he said. "Many large companies don't even realize they've

already overthrown their traditional design systems."

But without being able to get at the company's most important resources—the data and logic that have been stored on mainframe systems for many years—the reasons for connectivity and integration peel away. ■

BATTLEGROUND

◀ continued from page 23

data and business logic, but it's a whole new community accessing these transactions that they weren't designed for."

Web services "are an important enabler for higher-level integrations," said Vitria Technology Inc. CTO Dale Skeen. "People want Web services as ubiquitous and everyone supporting it. It's like the TCP stack...do you care who wrote it? You just want to make sure it's supported and it interoperates."

But as the opportunities grow for these integration solution providers, they face increasing competition from the application server Goliaths who, on the basis of Web services standards support and middleware technologies, will try to offer a one-stop shop that claims to solve the total integration problem.

WRQ's Wolfe, for one, doesn't believe a single vendor can solve the total integration problem at this point. "People want to jump to a silver bullet for integration, but it's not automatic. Just because someone can create a SOAP piece doesn't mean they can integrate mainframe logic or data. What are they creating the SOAP piece for?"

While the Web services area holds great promise for the future, companies aren't quite there yet. "Web services a year ago over-promised what [they] could deliver," said TIBCO Software Inc.'s director of products, Andrea Eubanks. "There are perhaps three or four customers actually deploying Web services, which is very small when compared to all who are doing EAI."

Some, though, fear that the EAI market could follow the application server market. As app servers now are considered just a small piece of a broader solution, so too will EAI pieces—such as data transformation and warehousing, terminal emulation and direct access to host systems, all combined with business-to-business rules and protocols—become part of a wider answer.

"Web services already are attacking the low-level integration projects," said Hugh Raiford, vice president of marketing at ClientSoft Inc. "Give it two years and there will only be three or so players left. So EAI companies are playing up the services angle." ■

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EDITORIALS

United They Stand

Will the new UnitedLinux consortium make any difference? Probably not. It's unlikely that the alliance of Caldera International Inc., Conectiva S.A., SuSE Linux AG and Turbolinux Inc. to create a common core Linux version and operating-system installer for the server market will make enterprises more likely to adopt Linux than, say, Unix or Windows.

Details are still fuzzy about the new project, but it appears that each of the four Linux vendors will continue to sell its own distribution, and offer its own add-in packages, documentation and support. However, each of those distributions will use a common set of core packages, synchronized kernel version and file-location scheme, and will be marketed as "powered by UnitedLinux." Royalties from sales of those distributions will be returned to the common R&D organization.

The main benefit we see is that by cutting development costs, the four vendors will improve their profitability (or chances of profitability). If they plow those savings into sales or marketing, the alliance might also help these companies increase their combined market share, presumably against Red Hat, the industry giant. But it's more likely that increased market share would come, at least at first, by taking sales from smaller Linux server distributions like Debian or Mandrake.

The consortium's founders maintain that by consolidating R&D and creating a single brand name, UnitedLinux will present a single Linux platform on which hardware and software vendors can certify their products. That, in turn, will inspire new hardware and software vendors to enter the market, lead to greater demand for Linux-certified hardware and software by enterprise customers, and create greater access to reseller channels. Yet the hardware and software makers that have pledged support for the UnitedLinux program already are selling Linux-compatible products. Also, it's difficult to see how the consortium will encourage Linux adoption among enterprises still on the fence about the open-source operating system.

The UnitedLinux consortium is reminiscent of the Unix community's many futile efforts to create a common technology base and marketing message. Those failed efforts squandered valuable resources and customer goodwill. Many versions of Unix have disappeared over the past two decades, and the remaining stalwarts, such as AIX, BSD, Mac OS X and Solaris, are thriving because they've abandoned uniformity and have gone in separate directions.

Unless market share leader Red Hat joins the UnitedLinux party—and there's little reason for it to do so—it appears that these four Linux distributors are heading down that same well-trodden path, offering the promise of an "industry standard" while unlikely to deliver anything of the sort.

Web Services+Java=Reality

It's here, finally: Last week, Sun was expected to release the tools and APIs for implementing Web services in Java. Many of those APIs aren't exactly new, as Sun has released "early access" code based on still-in-progress Java Community Process JSRs for many months. But at long last, enterprises that prefer deploying applications based on nonbeta code will have a stable platform to work with.

Sun, welcome to the party. ■

GUEST VIEW

PROJECT MANAGEMENT AND AGILE METHODS

After 14 years of experience in the software industry, and much gray hair, I have grown to be suspicious of the latest and greatest techniques that frequently fan out like wildfire in the software industry. Many techniques promise a lot, but often have problems delivering on these promises. The big bump in the road that makes things fall apart usually seems to be people-related. Why people? Most people dislike following a process. We are by nature creative beings and hate being regimented. Something that requires us to follow detailed instructions at each stage is frequently going to be ignored as we try to play it by ear. Besides this, a lot of human capability is harnessed by communication. Two people working together can do much more than two people working alone. But they can also end up doing much less if they cannot communicate and work with each other. Many methodologies ignore these dependencies.

Indeed, ever since developers have first started building soft-



SANJAY MURTHI

ware, people have tried to establish standard processes and methods to manage the software definition and development process. So we have had Structured Systems Analysis & Design, RAD/JAD, methods based on Software Engineering Institute's Capability Maturity Model and ISO 9001, Rational's Unified Process and so on. Many have been used very successfully to deliver software on time and on budget. However, the costs have been quite large in terms of effort required to follow the process, creating intermediate designs and documentation and accommodating changes. Someone has to work hard to keep communication lines open, and make sure all steps are completed and documentation is kept on track. If this is not done, the project frequently ends in failure.

These sort of bad experiences have encouraged people to look at some less "heavy-weight" methods of doing things. Among the most popular has been Extreme Programming (XP). Other methods have been

Crystal, DSDM, SCRUM and so on. Last year the leading practitioners of these methods got together. After much argument and soul searching, they finally grouped all these methods under a common banner—"agile" methods. They share many common characteristics, such as iterative development, less process, emphasis on personal communication and teamwork, as well as early testing and so on. They have become very popular among many project teams since they are less process oriented, empower the teams and reduce peripheral activities.

As a manager I was at first suspicious of them—my gray hairs started tingling! It looked like a way for people to do what they wanted with little supervision. The concept of flexible requirements meant that I had problems creating a project plan. What were the deliverables? What are the milestones? How does one estimate the time needed? How was the QA team supposed to know what to test when they had no idea what the final requirements would be? However, wiser heads than mine prevailed,

LETTERS TO THE EDITOR

DON'T SPIT ON WEB SERVICES

I understand Steven J. Vaughan-Nichols works with Java, so I'm not surprised he is very protective of Sun.

If the point of this article ["WS-I: Another Standards Battle Begins," May 15, page 27, or at www.sdtimes.com/cols/javawatch_054.htm] is the WS-I, then don't spit on Web services. He argues for Sun to be involved in the WS-I but puts down Web services. Sun has been invited to the WS-I and is not joining because they want a seat at the big-kids' table. Being involved should be the important thing. Working on the inside is the value, not crying about not being invited to the prom.

I'm also bothered by Steven putting down Web services based on a standards issue. I guess he is comfortable with the open Java standard he is working with...wait, there isn't one! Anyhow, the W3C has a long and involved process, but that doesn't mean the technology is flawed. A standards body doesn't decide what's a good

idea or what technology will succeed. We've had production Web services running a year now. In addition, perhaps Steven should read up on Web services/SOAP. It's XML over a transport mechanism (usually HTTP). We have not had any trouble coordinating how things work together. Our Web services are working today from both Windows-based and Java-Linux clients. It's odd that later in the column he almost sounds like he likes Web services.

As far as ebXML is concerned, just because the UN backs it doesn't mean anyone will use it. Technology succeeds because it catches on. The UN isn't going to spend millions to help ebXML catch on.

Peter Osbourne

WIRELESS MARKET CHANGING

I'm disappointed in a quality publication using its editorial space to misrepresent the picture in the wireless application space ["More than 'Phone Home,'" May 15, page 22, or at www.sdtimes.com/opinions

/opinion_054.htm]. While it is true that current devices in the U.S.A. have limited screen size, processing power and storage, this will change just as the PC market did, but even more rapidly. Other countries already enjoy these form factors and have developed real applications to take advantage of these devices.

Is there a need for real applications? Absolutely. Beside the obvious CRM plays, e-mail and instant messaging capabilities, the adoption curve is driven by two things:

1. Innovators finding new uses and, as with all technology, a certain coolness factor.

2. Particularly here in the U.S.A., the business need, and realization that changes to business processes can occur thanks to a new application or method of doing business. (In 1990 who would have thought an online swap meet was cool?)

Who, you ask, needs new applications on remote devices? Here is just one example from a client of mine: financial institutions, which depend on real-time information, where millions of dollars are at stake on

and we decided to follow a process based on XP.

The results were a pleasant surprise. Developers were empowered and worked closely with other groups to identify issues and requirements. Frequently individuals brought up problems that they knew needed to be addressed based on their interactions with others and their sense that they were in charge. Pair programming turned out to be very popular. At times we even had triple programming.

All of us project managers had to change the way we planned and managed projects. The user stories to be done in each iteration became the project's high-level requirements. Based on time estimates provided by our teams, we could track our progress against the actual development. Most requirements changes to user stories were handled quickly and controlled based on the time "budgeted" for the user story. Weekly demos of the work being done to all interested groups helped identify problems early. Regular system builds and regression testing helped stabilize the code quickly. We did have a few surprises, but they became less frequent as we got used to the process.

What did I learn in terms of

what works and what does not? Communication is key (as always). Project managers have to ensure that team members are talking with the right people on a regular basis. Project managers must step in as soon as they see possible communication problems. For example, we sometimes had problems when one developer tried to talk with another developer in another team. The other developer was either too busy or did not know what needed to be done (sometimes they did not care).

The solution was to get the managers of both teams involved to quickly cut through the bottlenecks. Good architects and designers are essential to making sure proper design principles are followed and refactoring is done as needed. Proactive risk analysis helps identify dependencies early and reduce integration surprises. Collaboration tools make it easier to work as distributed teams in multiple locations.

Organizations that decide to switch to using agile methods for software development have two major challenges. One will be training people (users, managers, developers, analysts, designers, testers, technical writers and so on) in using these methods and following

their best practices. The second, which is harder to overcome, is to set up their management systems to effectively plan, measure, share information on and control their software definition, development and delivery efforts.

The second challenge is frequently glossed over in most literature, but it is crucial to making agile methods work on larger projects. This will require changes in team structures and project management methods. Project managers and their superiors have to change the way they do things as well as put in better data gathering, information sharing and risk management systems for agile methods to work effectively on larger projects. Not having good management and reporting systems in place will ensure one has many surprises, mainly of the unpleasant variety, when the system delivery date gets closer.

This does not mean that agile methods are doomed to fail or have problems like many other methodologies. Agile methods are at the cusp of "crossing the chasm" (as defined in the book "Crossing the Chasm" by Geoffrey A. Moore) and becoming part of the mainstream. Till now, folks who can be consid-

ered technical visionaries and early adopters have used them very successfully. Most recently object-oriented analysis and design went through this chasm crossing and became part of the mainstream.

For agile methods, a big hurdle to crossing the chasm is the perception that they can work only for small projects and with committed developers. This will be true if we ignore the efforts involved in keeping both project teams and their management agile. Not all developers are interested in being craftspeople—a significant assumption of many current agile methods. Besides this, inexperienced team members and managers can find themselves driving off a cliff as they struggle to learn how to do their jobs.

As managers, we have to work with the limitations imposed by organizations. Good mentoring and advice from those who have been there before can be helpful in handling these challenges. Agile methods can help deliver increases in productivity, improve quality, increase teamwork and reduce project costs when properly implemented and managed. ■

Sanjay Murthi is President of SMGlobal Inc.

the tick for Currency, Commodities, Futures and Equities dealers.

The ability for these high-impact employees to access a subset of a "Bloomberg terminal" in their hand is invaluable. J2ME applications represent a viable client/server model unlike the failure of WAP—real applications with real functionality for real business uses.

The evangelizing that is occurring in the market is a result of forward thinkers seeing new ways and methods of conducting business. Let's support these innovators, put them to the test and watch them thrive. Now that would be worthy of your editorial.

Kevin Sharp

Beachhead Consulting

BROWSER NO END-ALL

Andrew Binstock's column, "Cross-Platform GUIs on the QT," [April 15, page 29, or at www.sdtimes.com/cols/middlewatch_052.htm], is an excellent synthesis, which I fully subscribe to. The idea of the Web browser as the be-all and end-all user-interface paradigm seems down-

right stupid to me, but many people are still sheepishly addicted to it. Even handheld devices will soon have so much local processing and storage capacity that applications will obviously take advantage of it to create an acceptable user experience. That means fat clients.

Web services technology will indeed be a strong enabler, allowing the gathering of all sorts of information and to perform sophisticated processing, locally.

Harm Smit

CRUSHED UNDER THE WHEEL

I could hardly disagree more with the premise in "Component Reuse: Does Anyone Get It?" [April 15, page 16, or at www.sdtimes.com/news/052/special1.htm]. Perhaps the author is able to take pride in continually reinventing the wheel. To which I offer Alice Cooper's summation—that she too will soon be crushed "Under My Wheels."

Mark Underwood

Context Machines Corp.

DELPHI 6 'A MESS'

Your article "Borland Will Push .NET Out of Windows," [Feb.

1, page 1, or at www.sdtimes.com/news/047/story1.htm] is the same stupid talk we already heard when they offered us Kylix and Delphi 6.0.

But if you take a closer look into the developers news groups, you will read the "real-world" experiences with this adventure: Delphi 6 is a mess. Even with Service Pack 2 it still has a lot of bugs. It is not compatible with Delphi 5, and the CLX lib is not even close to be working OK; they have added yet another DB lib (dbClx)—almost stopping further development on the ADO support, which needs a lot of further attention to become acceptable. They now have BDE, ADO, IBX and dbClx—just a little too much for such a small company.

Microsoft's VS.NET has two major key features that do not appear in any Borland product: ASP.NET, giving you a great framework for Web (HTML) application development, properly separating code and layout; and CLR, for the first time making development almost independent of the programming language.

Borland does not have any-

thing comparable—no one has at the moment. I guess we will see today's Borland customer (especially Delphi programmers) switch to VS.NET because it simply gives you what you really need for a good price—professional SW development for Linux is today a tiny market and out of focus.

Hansjörg Reister

WORTH EVERY PENNY

Andrew Binstock is right as usual ["Acrobatics in the Enterprise," Nov. 1, 2001, page 33, or at www.sdtimes.com/cols/middlewatch_041.htm]. pdfFactory is a great little program and well worth every penny.

I had clipped this article when I first saw it, but couldn't find it when I was ready to buy—thanks for posting it on your Web site. It was a quick find with google.com.

Anneliese Gimpel

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THE SOFTWARE SIDE OF SUN

In my last column, we discussed Sun's prospects in its main business: selling hardware. Intel boxes are consuming the low to middle part of the market for servers and workstations; the high end is tightly sealed by IBM; and the middle-to-high tier where Sun finds itself is ringed by established vendors Hewlett-Packard and IBM. Storage, Sun's other hardware outlet, is likewise dominated by vendors known, liked and trusted by IT.

In many ways, Sun still has to win the trust of IT, a task that is made more difficult by Sun's longstanding pugnacious response to competitors (the gloating in success and filing lawsuits in defeat) and its comparatively short-lived presence in the server market. IT purchasers prefer companies that are stable, uncontroversial and dependable. Bragging about putting the dot in dot-com gets you little in their book.

Sun's history is one of extensive investment in software as a means of delivering added value on the hardware. This indirect approach has certainly benefited Sun and the wider computer industry. NFS, Java and numerous other technologies have come out of this particular fount of creativity. The benefit to Sun has not really been in hardware sales directly, but in the mantle of industry-leading innovation, which helped to distinguish it from numerous Unix competitors.

Today, and actually for a long time, the software that has driven Sun the most actual server sales is—no surprise—Oracle. A rule of the business insufficiently discussed is: The database vendors drive hardware sales at IT, both initial purchases and expansions. Understand this, and a clearer picture of the whole market can be obtained.

With database sales in a slump and Oracle suffering through one of the most difficult periods of its history, Sun is being taken along for the ride, and there's nothing it can do about it. Moreover, according to analyst reports, Oracle is on the verge of losing database market-share leadership to Sun's archenemy, IBM. How many DB2 sales will translate into sales of Sun hardware? As you know, very few.

Sun has tried mightily to formulate a software story of its own in the hopes of using it to drive hardware sales. The most recent attempt was the reintegration of the iPlanet semi-spinoff, after the expiration of its joint development agreements with Netscape and AOL Time Warner. But after recognizing that the iPlanet line was still a series of incompletely integrated point products, Sun rebranded them all, in mid-April, under a new name: Sun Open Net Envi-

ronment (Sun ONE). It also rebranded non-iPlanet software such as its Forte tools as Sun ONE, and is even positioning its new Solaris 9 version of Unix as the foundation of Sun ONE as well.

The new definition of Sun ONE co-opted the previous ambiguous positioning of Sun ONE as a set of broad initiatives for Web services, or as Sun used to refer to it, "Services on Demand." Rather, we can now see that Sun ONE is purely Sun's response to .NET, meaning that the Web services response is not a technology specification as a complete Java solution might have been, but rather a Sun-specific implementation of a complete software stack featuring J2EE with a set of ancillary accoutrements.

Separately, in mid-May, Sun announced the availability of StarOffice 6.0 at a cost of \$76. The product, which provides most of the functionality of Microsoft's Office suite but uses open file formats based on XML, has an open-source counterpart, Open Office 1.0, also from Sun. This gambit is peculiar and, I believe, likely to be an obstacle to Sun's hardware plans. Work with me here. So, if the company sells 2 million instances of StarOffice, the total contribution to Sun's bottom line is still significantly less than 1 percent of revenues. Meanwhile, Sun will have to invest in tech support for these 2 million users, who, in this hypothetical example, willingly walked away

from their Microsoft Office investments to spend additional funds for an alternative that Sun has just begun to sell.

A more-compelling rationale is that Sun will begin to actively promote Linux workstations and desktops but cannot do so without a productivity tool like StarOffice. As discussed in the previous column, though, Linux sales cannot be Sun's salvation. Not because of Linux, but because the big ticket credentials for Linux servers are not established, and if they ever are established, it will be by IBM, which has openly embraced Linux on high-end machines, and in fact has a long history of deriding the operating system.

The final aspect of Sun's story is Java—a great product but not likely to make money. Sun widely acknowledges that beyond licensing fees, it has seen little revenue from Java. And nothing in Sun's announced plans suggests that will change soon.

In sum, software at Sun is currently an inchoate story, with no overarching point. Barring significant changes, it will not be a driver for Sun's hardware sales nor will it represent a significant revenue stream by itself. With Sun hardware already in difficult straits, the absence of a software story further supports a bearish assessment of Sun. ■

Andrew Binstock is the principal analyst at Pacific Data Works LLC.

MIDDLEWARE WATCH



ANDREW BINSTOCK

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APPLE AND JAVA: TASTY OR TERRIBLE?

When I think operating systems for Java development, I think of Solaris, Linux and Windows 2000, usually in that order. I don't think about Mac OS X—which goes to show that I'm out of the loop. It appears that the next generation of Macintosh developers is adopting Java. Who would have thought it?

Of course, it makes sense when you think about it. Mac OS X is based on FreeBSD and NextStep Unix—and Java and Unix get on like bread and butter. According to Apple, since Mac OS X's March 2001 launch, the Apple developer community has more than doubled, and more than 46 percent of Apple Developer Connection members are working in Unix or Java. While Apple doesn't break down the numbers, I'd venture to guess that at least a quarter of those developers are working with Java.

"So who cares?" you ask, pointing out that the Mac is a niche market. Well, maybe you should care; Apple claims that it has shipped more than 3 million Mac OS X-based machines. In case you haven't been keeping score, that would make Apple the No. 1 supplier of Unix-based desktops in the world. That sure sounds like a viable market.

The next question, though, is an important one: Are the tools there?

The basic tools are there. If you want

to develop on the Mac with the current Mac OS X Developer Tools, you get J2SE 1.3.1 (<http://developer.apple.com/java/>), the Hotspot 1.3 JVM, QuickTime for Java and a host of other goodies. Existing Objective C developers should be pleased to know that they can use Mac OS X's IDE, Project Builder, and Interface Builder to make user interfaces. With the latter one, you do give up some portability, but your applications will fit right into a Mac user's desktop.

Your Java programmers, however, may be wondering about JDK 1.4, which, after all, has been available on Linux, Solaris and Windows since February. While Apple indicates that JDK 1.4 will be coming soon, it's not here yet. My best educated guess is that JDK 1.4 won't be putting in an appearance until the next edition of Mac OS X, Jaguar, arrives later this summer.

On the plus side of the ledger, I'm told that Java runs much faster than it did a year ago, and that's not just because the microprocessors that power today's Macs are faster. The code has been optimized since the first days of Mac OS X and simply runs much more smoothly. Mac OS X programmers also tell me that Java works well with Cocoa, the object-oriented

application development environment and APIs that are the foundation of choice for building Mac OS X applications.

If your people are Java developers first and Mac OS X programmers second, and wouldn't know Project Builder if it hit them on the head, can you use tools you already know from other platforms to build Java Mac apps? Yes, but there aren't as many as you might like.

The only really popular Java development environment that runs on Mac OS X is Borland's JBuilder 6 for Mac OS X, which appears to be feature- and version-compatible with its Linux and Windows brothers. If your programmers already know JBuilder, they can develop on modern Macs.

Beyond Borland, things get funkier. I'm told that you can run Oracle9i Developer Suite on Mac OS X, but you have to play tricks to get it working. Specifically, you need to install the Linux version and then change the Java home in the jdvev.conf file to: SetJavaHome/Library/Java/Home.

Then, you transform the look to Mac OS X. I'm told it works flawlessly, but I haven't tried it myself. If you want to play with it, it's a free download from <http://www.oracle.com/ip/develop/ids/index.html>.

You also can run NetBeans on Mac OS X, but it doesn't play well with the Aqua interface. What this means in practice is that you must launch Net-

Beans from a terminal. On the other hand, you can't run Eclipse at all. In theory, I suppose one could tweak Eclipse's Red Hat 7.1 with Motif code to launch from the terminal, but the idea of a Motif look-and-feel environment running under Aqua is extremely unattractive. And this, mind you, from someone who doesn't have a problem with screen-scraping green on black AS/400 applications to "Web-enabled" interfaces.

So, will Mac OS X turn out to be a major Java development and deployment platform? I'm not sure. On the one hand, Java on the Mac is pretty darn good, and the applications I've seen run impressively fast on it, but I know that many developers want to see JDK 1.4 running on Macs before taking it too seriously. While I'm fond of JBuilder, I'd also like to see a wider variety of developer tools running natively on Mac OS X.

Bottom line: It's worth taking Mac OS X seriously as a development and delivery environment to the extent of adding a Mac or two to the house and playing with it between projects for now. For serious development, though, let's wait to see how JDK 1.4 looks when it arrives. Only then should you decide if it's worth adding Mac OS X to your Java platform menu. ■

Steven J. Vaughan-Nichols has been writing about technology for more than 15 years and also has worked as a programmer for NASA and the Dept. of Defense.

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WITH PORTALS, IT'S WHAT YOU KNOW

Sometimes, it's not how big your portal is, but rather what you do with it that counts. When we last talked about portlet development ("Smooth, Satisfying Taste of Portlets," May 1, page 37), the idea was to create specialized, easily defined small portals that would fit into a larger framework. Say you've checked out those frameworks and know which will work best for you. What type of portal should you tackle first?

Of course, you might find that the decision as to what will be first is not yours to make. Somebody, somewhere has gotten the ear of the board, and you already have your marching orders. If that's the case, then you don't need me to tell you what to do. But suppose it's not the case?

If you have the option, now is the time to find a task to tackle that will do the company a lot of good, and at the same time give others a taste of just what can be done when you and your colleagues set out to do a portal. One project you might think seriously about tackling is a knowledge management portal. There are a couple of reasons for this. The first is that good knowledge management is important to keeping your company competitive and efficient. Closer to home, though, is that by being proactive and starting it yourself, you get to control the scope.

I know you've heard horror stories

about how knowledge management portals have become all-consuming entities that effectively eat their IT departments. It doesn't have to be that way. In fact, that's one of the best reasons for taking the initiative yourself. Start small, design for growth, and plan for success.

Of course, talk is cheap, especially talk from newspaper columnists. But the fact is, you can design a portal of this kind using what you've learned about portlets. Start with something you know you can accomplish. For instance, if you happen to be already familiar with one department, you can start there.

One example that I know well comes from a time when I worked for a major consulting firm. In those days, the concept of a portal was still far in the future, so we did knowledge management the hard way: on paper. Where we used it most effectively was in proposal generation. We tracked specific capabilities that the company could claim expertise in, specific proposal elements that had proven successful in the past, and specific people who would add strength to the proposal. It was, in effect, knowledge management in its most basic form.

Were I to be heading up such a task today, the proposal team would be an

obvious place to start the knowledge management effort, and I'd do it with a portlet designed around that specific task.

In that portlet would be links to each proposal element available, from corporate capability tables and lists to professional resumes of managers. You'd find all of the required verbiage for each potential customer, the standard outlines for management plans, workflow diagrams, etc. You'd also find standard templates for each type of customer you'd be likely to write a proposal for. Once that knowledge management site was complete, the proposal function would become dramatically more efficient, and in many cases could be performed by the sales staff, reducing the load on the corporate support staff.

And because you'd be using a portlet inside a portal framework, you'd have everything you needed to expand your knowledge management portal, one portlet at a time. Even better, once your expertise with portlets becomes known throughout the company, you'll find requests for other types of portlets—perhaps something for managing customer relations—all of which can be fit right into your existing structure.

The result, of course, is that you avoid one of those thankless and massive tasks that portals, especially knowledge management portals, can become. You also

get to take control of your own development effort, at least to the extent of deciding the approach and methodology. You help your business, and you get to extend your sanity for another month or two.

GIRL SCOUT COOKIES

On another topic entirely, I was talking to my daughter a few days ago about her Girl Scout troop. Were there, she wondered, companies that could help community organizations (her troop, for example) put together Web sites? As is frequently the case when the young speak, that was a good question.

While there are people in many communities who will help organizations in many ways, including Web development, it's an area in which remarkably little is being done. When is the last time you or any of your colleagues have actually done a professional-quality job putting together a Web site for a deserving organization? Maybe your company has a policy for support of community organizations, perhaps by providing meeting facilities. But sometimes what these groups really need is expertise and experience.

Building a site for the local 4H club or your neighbor's scout troop can change the world for small community organizations. The efficiencies of the Web shouldn't just be for the big fish. ■

Wayne Rash is a technology journalist and consultant.



WEB
WATCH

WAYNE
RASH

A MATTER OF PREFERENCE

Over time, Redmond's tendrils may seem like they've glommed onto everything. Even with Microsoft's receiving a historic posterior chewing in court, folks still wonder if Redmond, Washington, will someday be the capital of the universe. So it's no surprise that .NET has many convinced that Microsoft wants to own the Web services market as well. Now I won't say that Microsoft doesn't want a big chunk of the business that Web services will spawn, or even that .NET is specifically designed to ensure that goal. But given the nature of the Web services architecture, anyone completely owning such an effort isn't just unlikely, it's arguably impossible.

First off, Web services didn't simply appear last year; they're an evolution of the component architecture idea. And that in turn is really only a subset of the larger concept of a Service-Oriented Architecture (SOA). The SOA architecture utilizes components and takes them to their next level, which means heavy concentration on ease of interoperability and transparency. Now transparency is where Microsoft usually sticks it to us, but interoperability is where we keep them honest. Score one for Web services.

Getting back to some Web services history, the concept really began back in the heyday of client/server development, where services generally meant

the capability to make a remote method call. Web services build directly on this concept and have brought the SOA concept out into the forefront over the past year or so. The bottom line is that any sort of Service-Oriented Architecture is based on the use of not only a heterogeneous network, but heterogeneous software components as well.

The "black box" component concept was the first step in allowing large systems to more easily manage an ever-increasing load of interdependent functions. Such a black box component simply represents an even smaller group of objects that have been roped together to fulfill a specific purpose and given the ability to openly communicate with the rest of its environment. But while the concept of components began within specific systems, languages and environments, today's component technology has broken through those barriers and is concentrating on interoperability across disparate systems. Enterprise JavaBeans, CORBA and even COM+ are aimed at communications across systems barriers, and .NET simply represents Microsoft's take on the next rung of this evolutionary ladder.

.NET and its so-called enemy, J2EE, represent the next step in component technology because they're aimed at

organizing large numbers of components and finding efficient ways of translating between them. Unfortunately, each environment concentrated only on components built within their borders. COM and COM+, for instance, have far better performance within a Windows-only environment, while EJBs work best within a J2EE-based framework.

Communication and remote invocation are special trouble spots with CORBA-based software utilizing IIOP for remote method invocation, while EJBs do so via RMI. So the next rung of component technology is happening in the framework space, where new frameworks aim to interoperate between components built using any technology. Some interoperability has managed to creep in already, but what .NET and the Web services concept represent is a true step forward.

A Web service is simply a specific function managed by a component, the result of which can be used by any other component or application via an open interface associated with the component. That interface has to be network-addressable and interoperable—extremely difficult within a closed software environment. But Web services take a step forward by taking a look back—at HTTP. Because Web services use HTTP as their general network protocol, they subsequently uti-

lize new technologies like SOAP, UDDI or even WSDL for specific component communication tasks.

SOAP, for example, is popular as a Web services data transport and payload protocol because it's based on XML. And with XML being primarily a text-based format, it can use tags to delimit data elements and easily manage all that over HTTP. .NET has specific support for SOAP, while J2EE can utilize Java servlets to accomplish the same thing.

UDDI is another example, having been developed to act as an industry specification for automatic discovery of Web services processes. UDDI also is based on SOAP and XML as a Web service aimed at both Microsoft and non-Redmond development tools and applications. Again, .NET contains integral support for UDDI, while J2EE can manage such communication via UDDI4J, a Java class library that allows Java applications to access any UDDI registry.

Look at the rest of the Web services specification and you'll find the results are similar. .NET versus J2EE isn't a battle for survival anymore; it's just a matter of preference. The real question is whether the fuel behind Web services, e-commerce over the Web, will retain its importance in this junkyard economy. Lose interest in that, and the whole issue is academic. ■

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WINDOWS
WATCH

OLIVER
RIST

RELATING TO MATURE DATABASE MARKET

In markets that feature very high barriers to entry, it is inevitable that only a few companies will come to dominate. Such, according to a recent report by research firm IDC, is the case with the relational database market.

In that space, it's Oracle, IBM and Microsoft, in that order. IDC's latest numbers show Oracle retaining its position as the overall relational database market leader despite some slippage last year, and describe Microsoft as posting "robust" growth. These three companies basically have a market that IDC says grew to \$12.7 billion in 2001 all to themselves; while a handful of challengers own a portion of the market, it's not enough to seriously challenge the leaders. Think about that...for most companies, a 3-plus-billion-dollar annual revenue would be phenomenal. But for these three, the database doesn't even account for all of their revenue, although for Oracle it's at the heart of its products.

Is the market overly dominated by the Big Three? Not according to Carl Olofson, IDC's research director for application development and deployment, who said the fact that three companies basically control the market is fine. "In a mature market, some [companies] dominate, but others fill important roles within certain segments of that market."

According to Olofson, among the niches where smaller database players (and there must be at least 30) can survive are in the application-specific database route—in which the DBMS is embedded in other software—or deep within vertical markets, where providing soup-to-nuts functionality specific

to that market is critical. For instance, if a database vendor does a good job of joining objects to relational tables, perhaps that vendor can really learn to excel in one or two types of objects to grab a niche share of the object-relational segment.

For a time, it appeared that object databases would actually pose a threat to the relational database players. But Olofson said, "The marketplace made up its mind that it wouldn't be an alternative. It won't be the database of record." Another perceived threat, XML databases, also will end up as a role player in larger configurations, Olofson opined. That is because the top RDBMS vendors are adding XML capability, recognizing that organizations have a need to hold XML data in its original form and to retrieve it quickly as part of a larger business process.

Such is life in a mature market. While XML provided a technological leap and created some opportunities for XML database vendors such as Excelon Corp. and Software AG, it already is clear that they will not threaten to unseat the Big Three.

Then there is Sybase, the acknowledged No. 4 player in the market. The company told SD Times earlier this year that it was all but abandoning the fight for RDBMS market leadership, focusing instead on an e-business development platform to grow its business.

Sybase, Olofson acknowledged, is no longer a serious threat to the Big Three, despite what he called its vertical-oriented strategy in financial markets and the fact that the company "was making headway until last year. They're attacking the market with other things in their arsenal. The danger is it looks like your

focus has changed from the database. People begin to infer where the company's emphasis is."

Also, through its iAnywhere division, Sybase has targeted the embedded device market as a new home for its database solutions. The embedded device market, in fact, is a hotbed of competition. Among the vendors vying in that market are iAnywhere, Empress and PointBase, while MySQL and PostgreSQL are among more than two dozen open-source RDBMS offerings. That leaves vendors such as Computer Associates, NCR and Progress to figure out where they will ultimately play in the enterprise database space.

Growth opportunities will exist in the future, Olofson said, as service providers that require high-volume databases with specific needs in terms of scalability and security look to ramp up. And there is always the possibility of further acquisitions; IBM used its purchase of the Informix database product line to catapult itself near the top of the RDBMS market.

Olofson pointed out, however, that while the market grew at only 1.9 percent from 2000 to 2001, IBM's DB2 solution grew ahead of that on its own, showing that IBM was gaining in the space even before the Informix acquisition. The slow growth in the market, as in the rest of the industry, revealed that companies dependent upon large contracts did not fare as well as those that could find life in middle-market installations, according to IDC's report.

At this point in the market, product differentiation is not as important, Olofson said—most offer similar functionality and features. It is in the areas of price, performance and service that the war over customers will be fought. ■

David Rubinstein is executive editor of SD Times.

INDUSTRY WATCH



DAVID RUBINSTEIN

BUSINESS BRIEFS

Expanding its modest presence in the embedded application space, **Borland Software Corp.** announced the acquisition of the assets of business partner **Highlander Engineering Inc.** and its VisiBroker-RT CORBA runtime for no more than \$2 million, the companies announced. The acquisition comes on the heels of Borland's introduction of JBuilder MobileSet and JDataStore, new tools for embedded software development. Borland claims that Highlander is the only embedded software provider to be compliant with the CORBA 2.3.1 specs. Frank Sloodman, Borland's SVP of products, said Highlander's product was an excellent fit because it was developed using the same foundation as Borland's Enterprise Server. "They had already taken our VisiBroker core and ported and adapted it to the requirements of real-time, including stripping it down to a tiny footprint," giving it real-time performance and reducing its power consumption, he said. It's available now as Borland VisiBroker-RT. . . . **Computer Associates International Inc.** has paid \$9.5 million in cash for the asset management software business of **Intraware Inc.**, in a deal that closed earlier this month. CA, already a reseller of Intraware's asset management solutions, will incorporate the products into its Unicenter product line. . . . **VA Software Corp.** announced third-quarter earnings results that showed declining revenues but sharply reduced losses. For the period ending April 27, VA reported revenues of \$5.1 million, down dramatically from \$20.3 million for the same quarter a year ago. For nine months, revenue was \$15.8 million, compared with \$118.9 million for nine months of fiscal 2001. The third-quarter earnings loss was \$7.7 million, or 15 cents per share, compared with last year's third-quarter loss of \$109.7 million, or \$2.21 per share. For nine months, the loss was \$72.3 million, or \$1.37 per share, compared with a loss of \$235.2 million, or \$4.93 per share, for the same nine months last year. ■



CALENDAR OF EVENTS

VBITS/VSLive June 16-19
New York
FAWCETTE TECHNICAL PUBLICATIONS
www.vslive.com/2002/ny

Web Services/JDJ/ XML Edge East June 24-27
New York
SYS-CON EVENTS INC.
www.sys-con.com/web-services-edge2002east

TechXNY/PC Expo June 25-27
New York
CMP MEDIA LLC
www.techxny.com

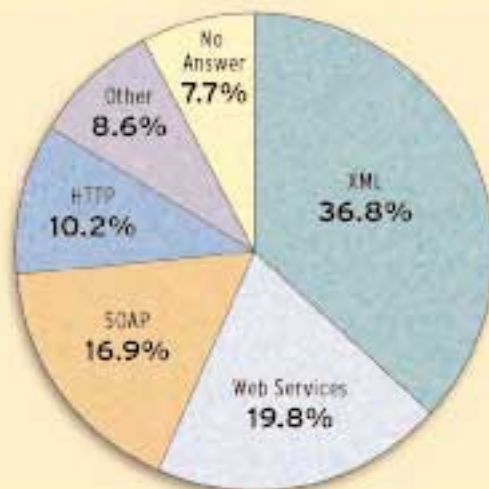
Realtime and Embedded Distributed Object Computing Workshop July 15-18
Arlington, Va.
OBJECT MANAGEMENT GROUP
www.omg.org/news/meetings/realtime2002/index.htm

O'Reilly Open Source Convention July 22-26
San Diego
O'REILLY & ASSOCIATES INC.
<http://conferences.oreillynet.com/os2002>

Information is subject to change. Send news about upcoming events to events@bzmedia.com.

If Java and Visual Studio .NET Meet Within the Same Project, What Level Of Interaction/Integration Will Most Likely Be Done?

EVANS DATA WATCH



In mixed-platform development organizations, where both Microsoft Corp.'s .NET and Sun Microsystems Inc.'s Java platforms will be supported for the foreseeable future, integration is becoming a top priority. But how? In a recent survey, Evans Data Corp. asked 813 developers what the level of interaction or integration would be if both Java and Visual Studio .NET met within a specific project.

The largest group, nearly 40 percent, indicated that integration would be based on XML. About one-fifth said that they would use Web services for the integration, and nearly as many responded that they would use SOAP, the Simple Object Access Protocol, to integrate Java and .NET. About one out of every 10 would use HTTP, the Hypertext Transfer Protocol.

Source: North American Developer Survey, Volume 1, 2002 © Evans Data Corp.
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